


**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

<b>APPLICATION FOR PERMIT TO DRILL</b>						<b>1. WELL NAME and NUMBER</b> NBU 1022-1211CS							
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES							
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES							
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.						<b>7. OPERATOR PHONE</b> 720 929-6515							
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217						<b>9. OPERATOR E-MAIL</b> julie.jacobson@anadarko.com							
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UT ST UO 01997-A ST			<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>							
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>							
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>							
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>			<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>							
<b>20. LOCATION OF WELL</b>		<b>FOOTAGES</b>		<b>QTR-QTR</b>		<b>SECTION</b>		<b>TOWNSHIP</b>		<b>RANGE</b>		<b>MERIDIAN</b>	
LOCATION AT SURFACE		2345 FSL 984 FEL		NESE		12		10.0 S		22.0 E		S	
Top of Uppermost Producing Zone		2237 FSL 492 FEL		NESE		12		10.0 S		22.0 E		S	
At Total Depth		2237 FSL 492 FEL		NESE		12		10.0 S		22.0 E		S	
<b>21. COUNTY</b> UINTAH			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 492			<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1674							
			<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 555			<b>26. PROPOSED DEPTH</b> MD: 8455 TVD: 8401							
<b>27. ELEVATION - GROUND LEVEL</b> 5224			<b>28. BOND NUMBER</b> 22013542			<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 43-8496							
<b>Hole, Casing, and Cement Information</b>													
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Length</b>	<b>Weight</b>	<b>Grade &amp; Thread</b>	<b>Max Mud Wt.</b>	<b>Cement</b>		<b>Sacks</b>	<b>Yield</b>	<b>Weight</b>		
Surf	11	8.625	0 - 2160	28.0	J-55 LT&C	0.2	Type V		180	1.15	15.8		
							Class G		270	1.15	15.8		
Prod	7.875	4.5	0 - 8455	11.6	I-80 LT&C	12.5	Premium Lite High Strength		270	3.38	11.0		
							50/50 Poz		1150	1.31	14.3		
<b>ATTACHMENTS</b>													
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>													
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER						<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN							
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)						<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER							
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)						<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP							
<b>NAME</b> Gina Becker				<b>TITLE</b> Regulatory Analyst II				<b>PHONE</b> 720 929-6086					
<b>SIGNATURE</b>				<b>DATE</b> 09/13/2011				<b>EMAIL</b> gina.becker@anadarko.com					
<b>API NUMBER ASSIGNED</b> 43047519780000				<b>APPROVAL</b> <div style="text-align: center;">           Permit Manager       </div>									

**RECEIVED: December 19, 2011**

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-12I1CS**

Surface:	2345 FSL / 984 FEL	NESE
BHL:	2237 FSL / 492 FEL	NESE

Section 12 T10S R22E

Uintah County, Utah  
Mineral Lease: UT ST UO 01197-A ST**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1135	
Birds Nest	1349	Water
Mahogany	1714	Water
Wasatch	4082	Gas
Mesaverde	6232	Gas
MVU2	7208	Gas
MVL1	7766	Gas
TVD	8401	
TD	8455	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program*

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8401' TVD, approximately equals  
 5,377 psi 0.64 psi/ft = actual bottomhole gradient

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Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,517 psi (bottom hole pressure  
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-  
 (0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

**Background**

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

*The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

#### ***Variance for BOPE Requirements***

*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

#### ***Variance for Mud Material Requirements***

*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

#### ***Variance for Special Drilling Operation (surface equipment placement) Requirements***

*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and*



*on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

***Conclusion***

*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

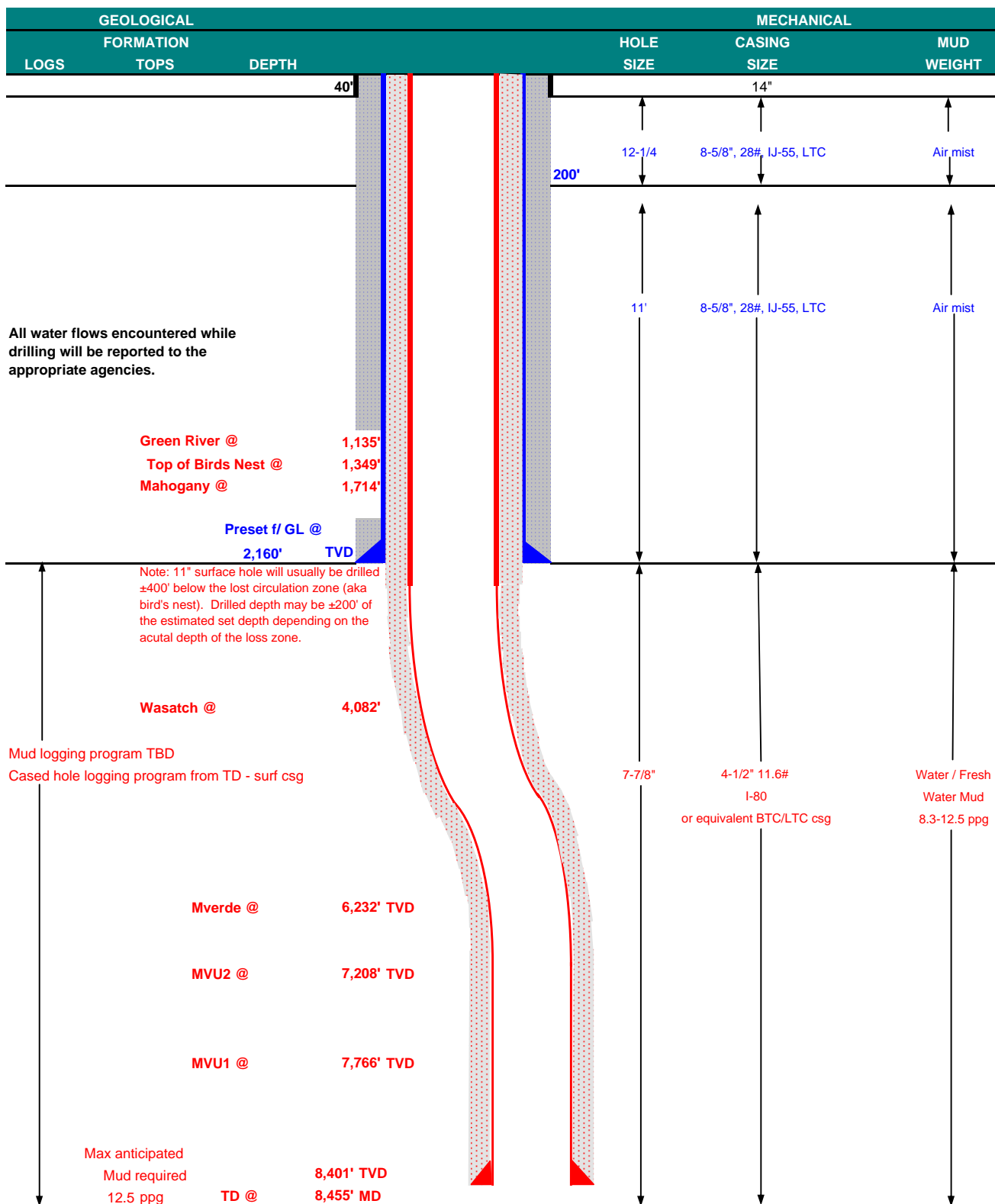
10. **Other Information:**

*Please refer to the attached Drilling Program.*



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	September 7, 2011		
WELL NAME	NBU 1022-1211CS					TD	8,401'	TVD	8,455' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		5224.1
SURFACE LOCATION	NESE	2345 FSL	984 FEL	Sec 12	T 10S	R 22E			
	Latitude: 39.962653		Longitude: -109.381687		NAD 27				
BTM HOLE LOCATION	NESE	2237 FSL	492 FEL	Sec 12	T 10S	R 22E			
	Latitude: 39.962352		Longitude: -109.379935		NAD 27				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.								





## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						LTC		BTC	
						BURST	COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,160	28.00	IJ-55	LTC	2.50	1.86	6.57	N/A
						7,780	6,350	279,000	367,000
PRODUCTION	4-1/2"	0 to 8,455	11.60	I-80	LTC/BTC	1.11	1.16	3.52	4.63

**Surface Casing:**

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	1,660'	65/35 Poz + 6% Gel + 10 pps gilsonite	150	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,575'	Premium Lite II +0.25 pps	270	20%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	4,880'	50/50 Poz/G + 10% salt + 2% gel	1,150	35%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:**

Nick Spence / Danny Showers

**DATE:****DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

**DATE:**

EXHIBIT A  
NBU 1022-1211CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

**T10S, R22E, S.L.B.&M.**

Found 1991 Aluminum  
Cap with Pile of Stones.  
Fence Post on SE side  
of Cap.

S89°59'W - 40.01 (G.L.O.)  
S89°57'13"W - 2640.76' (Meas.)

N89°39'W - 40.01 (G.L.O.)  
N89°41'22"W - 2640.46' (Meas.)

Found 1991 Aluminum  
Cap in Pile of Stones.  
Fence Post on North  
side of Cap.

Found 1991  
Aluminum Cap in  
Pile of Stones.

NBU 1022-1211CS (Surface Position)  
NAD 83 LATITUDE = 39.962619° (39° 57' 45.428")  
LONGITUDE = 109.382367° (109° 22' 56.523")  
NAD 27 LATITUDE = 39.962653° (39° 57' 45.551")  
LONGITUDE = 109.381687° (109° 22' 54.074")

NBU 1022-1211CS (Bottom Hole)  
NAD 83 LATITUDE = 39.962318° (39° 57' 44.343")  
LONGITUDE = 109.380615° (109° 22' 50.215")  
NAD 27 LATITUDE = 39.962352° (39° 57' 44.466")  
LONGITUDE = 109.379935° (109° 22' 47.767")

N0°01'W (G.L.O.)  
N00°25'25"E - 5276.36' (Meas.)

Not  
Monumented

**12**

**WELL LOCATION:  
NBU 1022-1211CS**

ELEV. UNGRADED GROUND = 5224.1'

Well Surface  
Position

984'

492'  
Bottom  
of Hole

2345'

2237'

N00°03'41"E - 2640.93' (Meas.)  
N0°07'E - 40.02 (G.L.O.)

Found 1991 Aluminum  
Cap with Pile of  
Stones. Fence Post  
on North side of Cap.

N00°05'48"E (Basis of Bearings)  
2634.07' (Measured)  
N0°09'E - 39.91 (G.L.O.)

Found Uintah  
County Aluminum  
Cap on 3/4" rebar.  
Pile of Stones

N89°52'55"W - 5312.93' (Meas.)  
S89°59'W - 80.02 (G.L.O.)

Not  
Monumented

Found 1991 Aluminum  
Cap in Pile of Stones.  
Fence Post on East  
side of Cap.

NOTES:

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
- The Bottom of hole bears S77°27'05"E 503.36' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW  $\frac{1}{4}$  of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

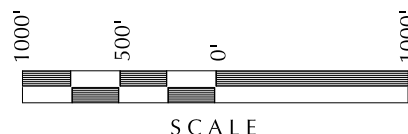
**WELL PAD: NBU 1022-121**

**NBU 1022-1211CS  
WELL PLAT**

**2237' FSL, 492' FEL (Bottom Hole)  
NE  $\frac{1}{4}$  SE  $\frac{1}{4}$  OF SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH.**



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182



SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROF. SEAL  
No. 6028691  
JOHN R. LAUGH  
PROFESSIONAL LAND SURVEYOR  
REGISTRATION NO. 6028691  
STATE OF UTAH 2-8-11

**TIMBERLINE**

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

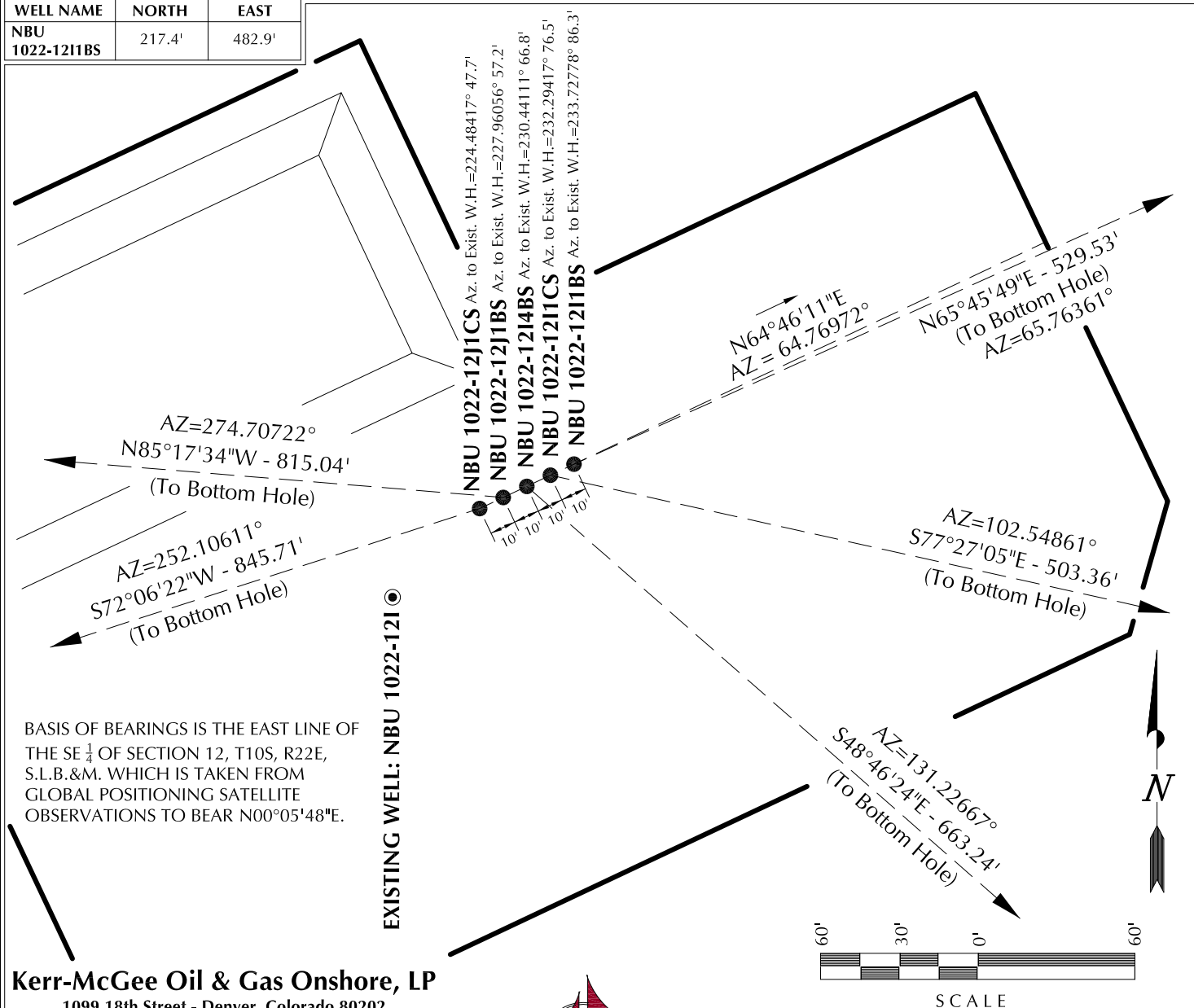
DATE SURVEYED: 01-20-11	SURVEYED BY: R.Y.	SHEET NO:
DATE DRAWN: 02-03-11	DRAWN BY: M.W.W.	<b>4</b>
SCALE: 1" = 1000'	Date Last Revised:	4 OF 17

**RECEIVED: September 13, 2011**

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-12J1CS	39°57'45.302"	109°22'56.871"	39°57'45.425"	109°22'54.423"	2333' FSL	39°57'42.742"	109°23'07.207"	39°57'42.865"	109°23'04.758"	2071' FSL
NBU 1022-12J1BS	39.962584°	109.382464°	39.962618°	109.381784°	1011' FEL	39.961873°	109.385335°	39.961907°	109.384655°	1815' FEL
NBU 1022-12J1BS	39°57'45.344"	109°22'56.755"	39°57'45.467"	109°22'54.307"	2337' FSL	39°57'46.012"	109°23'07.184"	39°57'46.135"	109°23'04.735"	2402' FSL
NBU 1022-12J1BS	39.962596°	109.382432°	39.962630°	109.381752°	1002' FEL	39.962781°	109.385329°	39.962815°	109.384649°	1814' FEL
NBU 1022-12I4BS	39°57'45.386"	109°22'56.639"	39°57'45.509"	109°22'54.190"	2341' FSL	39°57'41.063"	109°22'50.239"	39°57'41.186"	109°22'47.791"	1905' FSL
NBU 1022-12I4BS	39.962607°	109.382400°	39.962641°	109.381720°	993' FEL	39.961406°	109.380622°	39.961440°	109.379942°	493' FEL
NBU 1022-12I1CS	39°57'45.428"	109°22'56.523"	39°57'45.551"	109°22'54.074"	2345' FSL	39°57'44.343"	109°22'50.215"	39°57'44.466"	109°22'47.767"	2237' FSL
NBU 1022-12I1CS	39.962619°	109.382367°	39.962653°	109.381687°	984' FEL	39.962318°	109.380615°	39.962352°	109.379935°	492' FEL
NBU 1022-12I1BS	39°57'45.470"	109°22'56.406"	39°57'45.593"	109°22'53.958"	2350' FSL	39°57'47.613"	109°22'50.204"	39°57'47.736"	109°22'47.756"	2568' FSL
NBU 1022-12I1BS	39.962631°	109.382335°	39.962665°	109.381655°	974' FEL	39.963226°	109.380612°	39.963260°	109.379932°	492' FEL
NBU 1022-12I	39°57'44.966"	109°22'57.301"	39°57'45.089"	109°22'54.852"	2298' FSL					
NBU 1022-12I	39.962491°	109.382584°	39.962525°	109.381903°	1044' FEL					

## RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 1022-12J1CS	-259.8'	-804.8'	NBU 1022-12J1BS	66.9'	-812.3'	NBU 1022-12I4BS	-437.1'	498.8'	NBU 1022-12I1CS	-109.4'	491.3'
NBU 1022-12I1BS	217.4'	482.9'									



**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-12I**

**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 1022-12J1CS,  
NBU 1022-12J1BS, NBU 1022-12I4BS,  
NBU 1022-12I1CS & NBU 1022-12I1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH.



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**

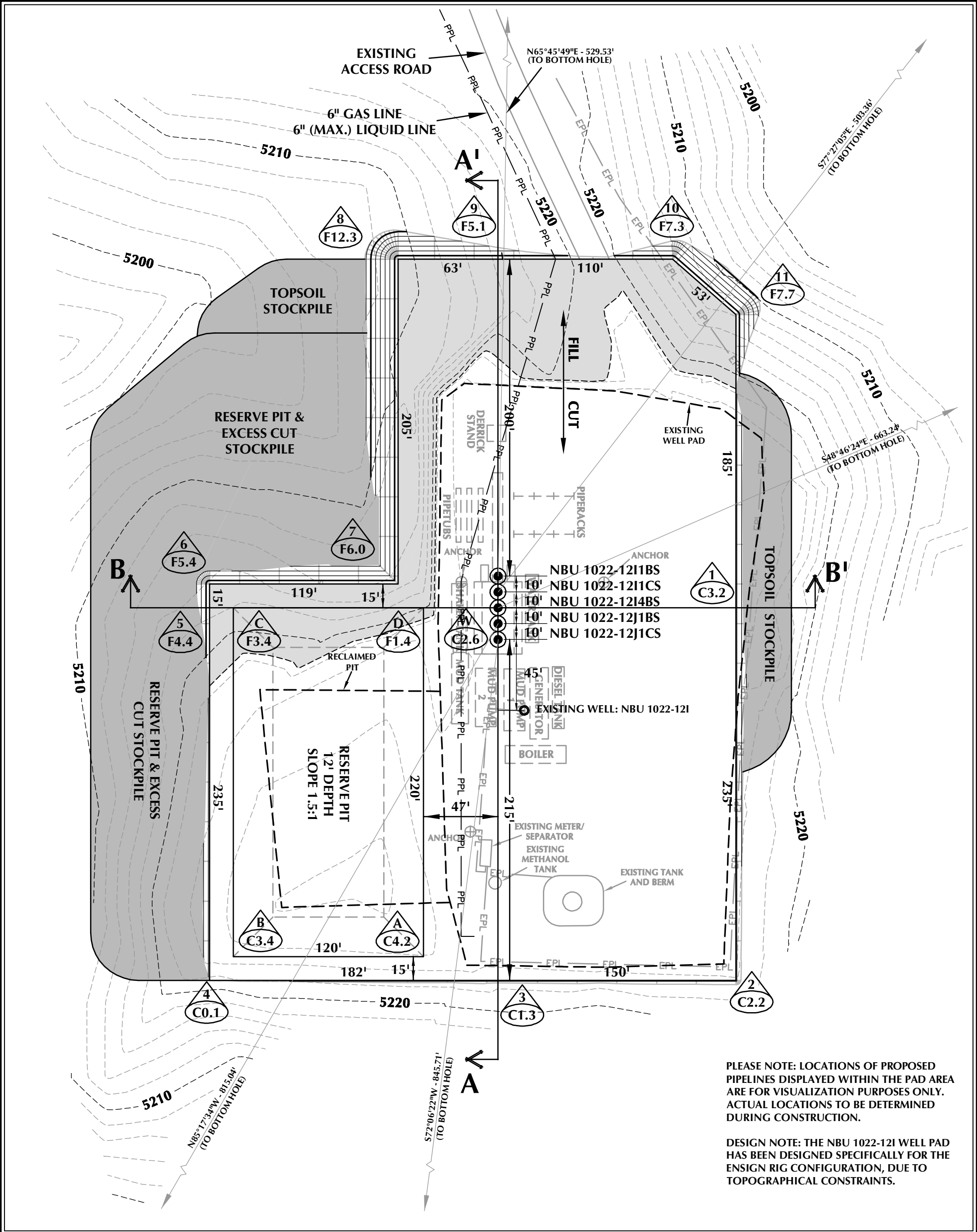
(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 01-20-11	SURVEYED BY: R.Y.	SHEET NO: <b>6</b> 6 OF 17
DATE DRAWN: 02-03-11	DRAWN BY: M.W.W.	
SCALE: 1" = 60'	Date Last Revised:	

**RECEIVED: September 13, 2011**

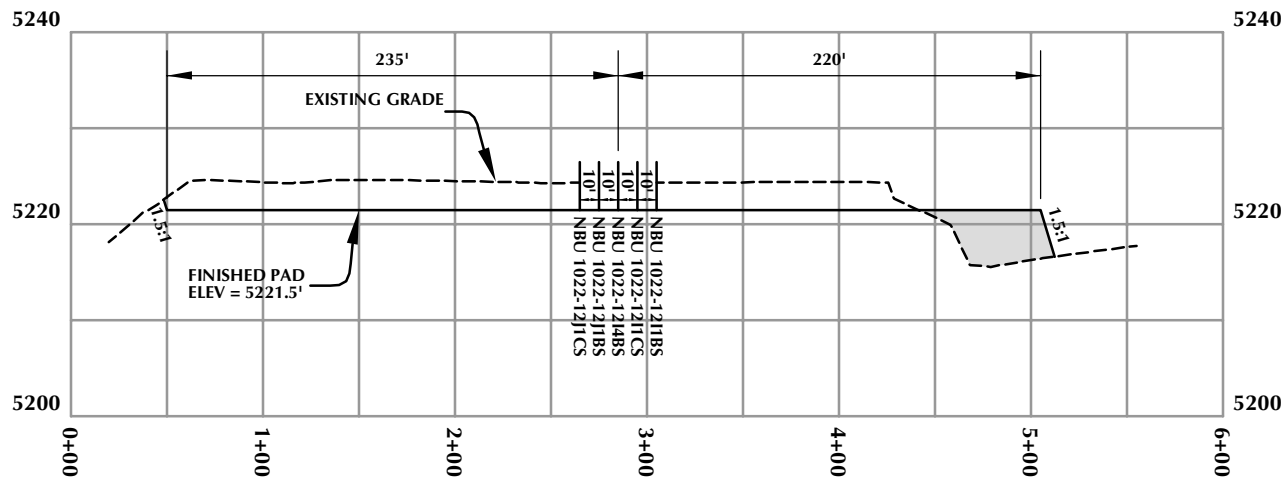




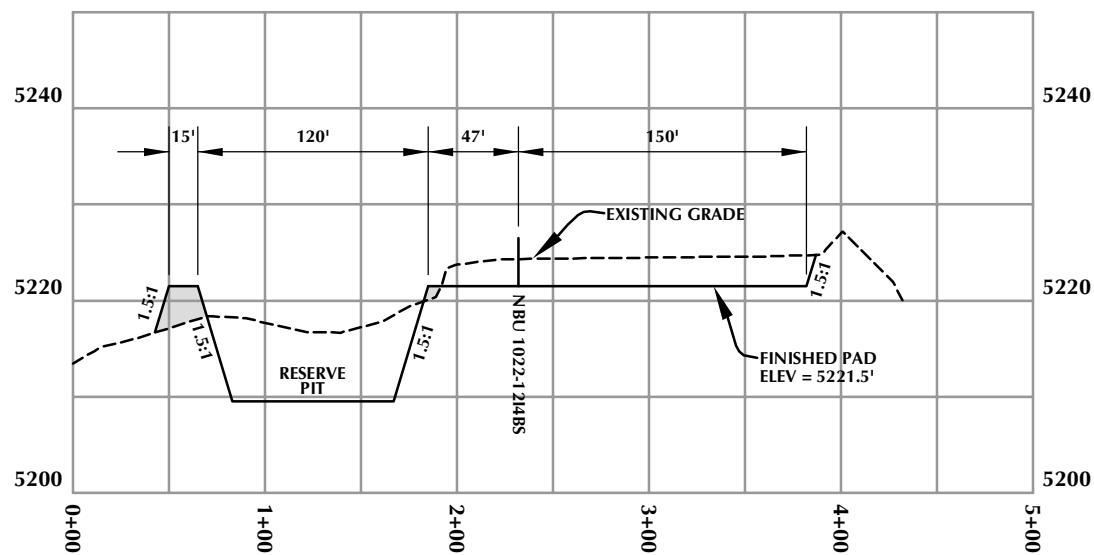
PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

DESIGN NOTE: THE NBU 1022-121 WELL PAD HAS BEEN DESIGNED SPECIFICALLY FOR THE ENSIGN RIG CONFIGURATION, DUE TO TOPOGRAPHICAL CONSTRAINTS.

WELL PAD - NBU 1022-121 DESIGN SUMMARY			WELL PAD LEGEND	
<p>EXISTING GRADE @ CENTER OF WELL PAD = 5224.1'</p> <p>FINISHED GRADE ELEVATION = 5221.5'</p> <p>CUT SLOPES = 1.5:1</p> <p>FILL SLOPES = 1.5:1</p> <p>TOTAL WELL PAD AREA = 3.14 ACRES</p> <p>TOTAL DAMAGE AREA = 6.00 ACRES</p> <p>SHRINKAGE FACTOR = 1.10</p> <p>SWELL FACTOR = 1.00</p> <p>Kerr-McGee Oil &amp; Gas Onshore, LP</p> <p>1099 18th Street - Denver, Colorado 80202</p>			<p>EXISTING WELL LOCATION</p> <p>PROPOSED WELL LOCATION</p> <p>PROPOSED BOTTOM HOLE LOCATION</p> <p>EXISTING CONTOURS (2' INTERVAL)</p> <p>PROPOSED CONTOURS (2' INTERVAL)</p> <p>PPL - PROPOSED PIPELINE</p> <p>EPL - EXISTING PIPELINE</p>	
<p>WELL PAD QUANTITIES</p> <p>TOTAL CUT FOR WELL PAD = 12,122 C.Y.</p> <p>TOTAL FILL FOR WELL PAD = 5,858 C.Y.</p> <p>TOPSOIL @ 6" DEPTH = 1,299 C.Y.</p> <p>EXCESS MATERIAL = 6,264 C.Y.</p> <p>RESERVE PIT QUANTITIES</p> <p>TOTAL CUT FOR RESERVE PIT +/- 9,210 C.Y.</p> <p>RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 35,230 BARRELS</p>			<p>609 CONSULTING, LLC</p> <p>2155 North Main Street</p> <p>Sheridan, WY 82801</p> <p>Phone 307-674-0609</p> <p>Fax 307-674-0182</p> <p>TIMBERLINE ENGINEERING &amp; LAND SURVEYING, INC.</p> <p>209 NORTH 300 WEST - VERNAL, UTAH 84078</p> <p>(435) 789-1365</p>	
<p>WELL PAD - NBU 1022-121</p> <p>WELL PAD - LOCATION LAYOUT</p> <p>NBU 1022-12J1CS,</p> <p>NBU 1022-12J1BS, NBU 1022-12I4BS,</p> <p>NBU 1022-12I1CS &amp; NBU 1022-12I1BS</p> <p>LOCATED IN SECTION 12, T10S, R22E,</p> <p>S.L.B.&amp;M., UINTAH COUNTY, UTAH</p>			<p>HORIZONTAL 0 30' 60' 1" = 60'</p> <p>2' CONTOURS</p> <p>SCALE: 1"=60' DATE: 3/8/11 SHEET NO: 7</p> <p>REVISED: TAR 4/22/11 7 OF 17</p>	



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS MAXIMUM RESERVE PIT DEPTH.

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-121**

**WELL PAD - CROSS SECTIONS**

NBU 1022-121CS,  
NBU 1022-121BS, NBU 1022-121BS,  
NBU 1022-121CS & NBU 1022-121BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH



**CONSULTING, LLC**  
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**TIMBERLINE**  
**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

HORIZONTAL 0 50' 100' 1" = 100'  
VERTICAL 0 10' 20' 1" = 20'

Scale: 1"=100'  
REVISED:

Date: 3/8/11

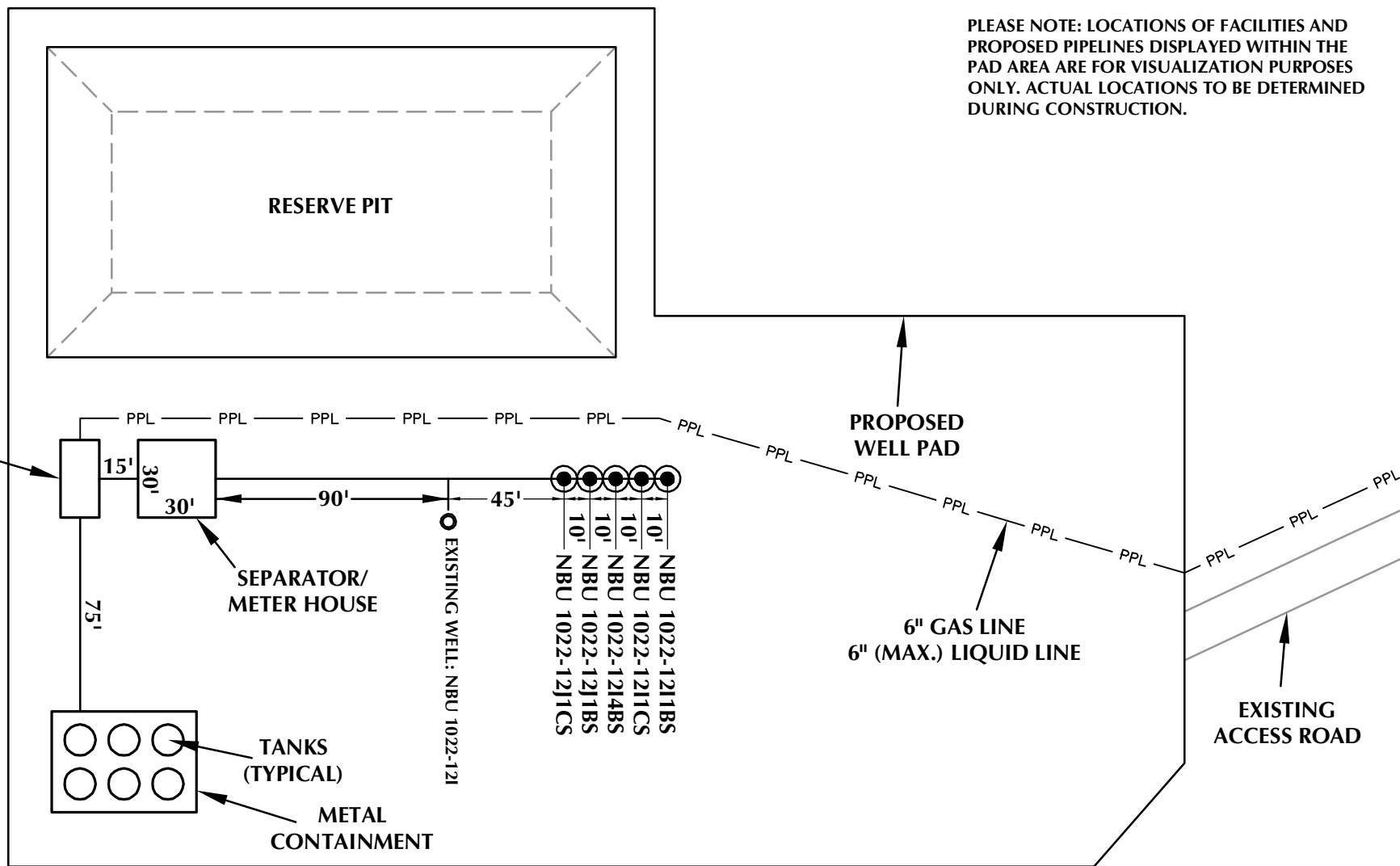
SHEET NO:

**8**

8 OF 17

**RECEIVED: September 13, 2011**





PLEASE NOTE: LOCATIONS OF FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-121**

**WELL PAD - FACILITIES DIAGRAM**

NBU 1022-12J1CS,  
NBU 1022-12J1BS, NBU 1022-12I4BS,  
NBU 1022-12I1CS & NBU 1022-12I1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH



**CONSULTING, LLC**  
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Fax 307-674-0182

**WELL PAD LEGEND**

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PPL PROPOSED PIPELINE
- EPL EXISTING PIPELINE



HORIZONTAL 0 30' 60' 1" = 60'

**TIMBERLINE**  
ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

Scale: 1"=60'

Date: 3/8/11

SHEET NO:

**9**

9 OF 17

**RECEIVED: September 13, 2011**

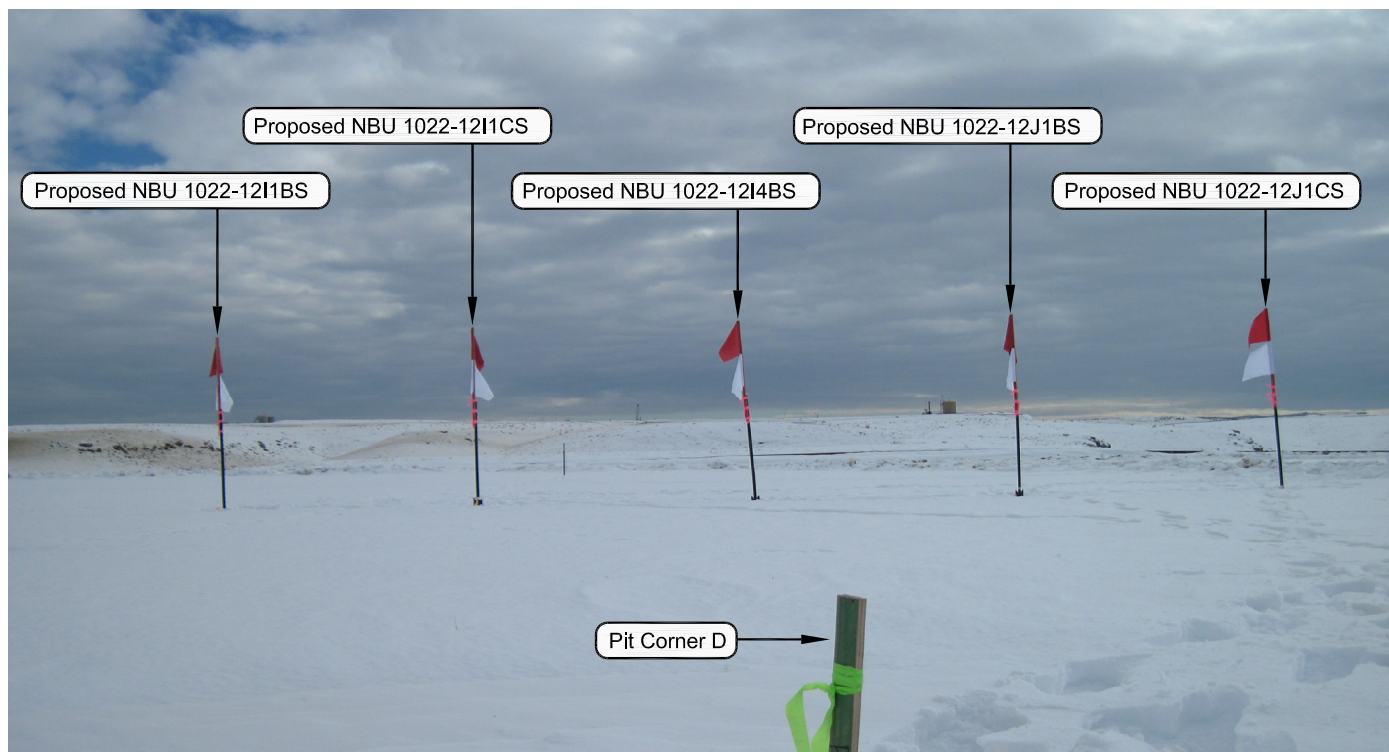


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHWESTERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-12I**

**LOCATION PHOTOS**  
NBU 1022-12J1CS,  
NBU 1022-12J1BS, NBU 1022-12I4BS,  
NBU 1022-12I1CS & NBU 1022-12I1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., Uintah County, Utah.



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
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**TIMBERLINE**

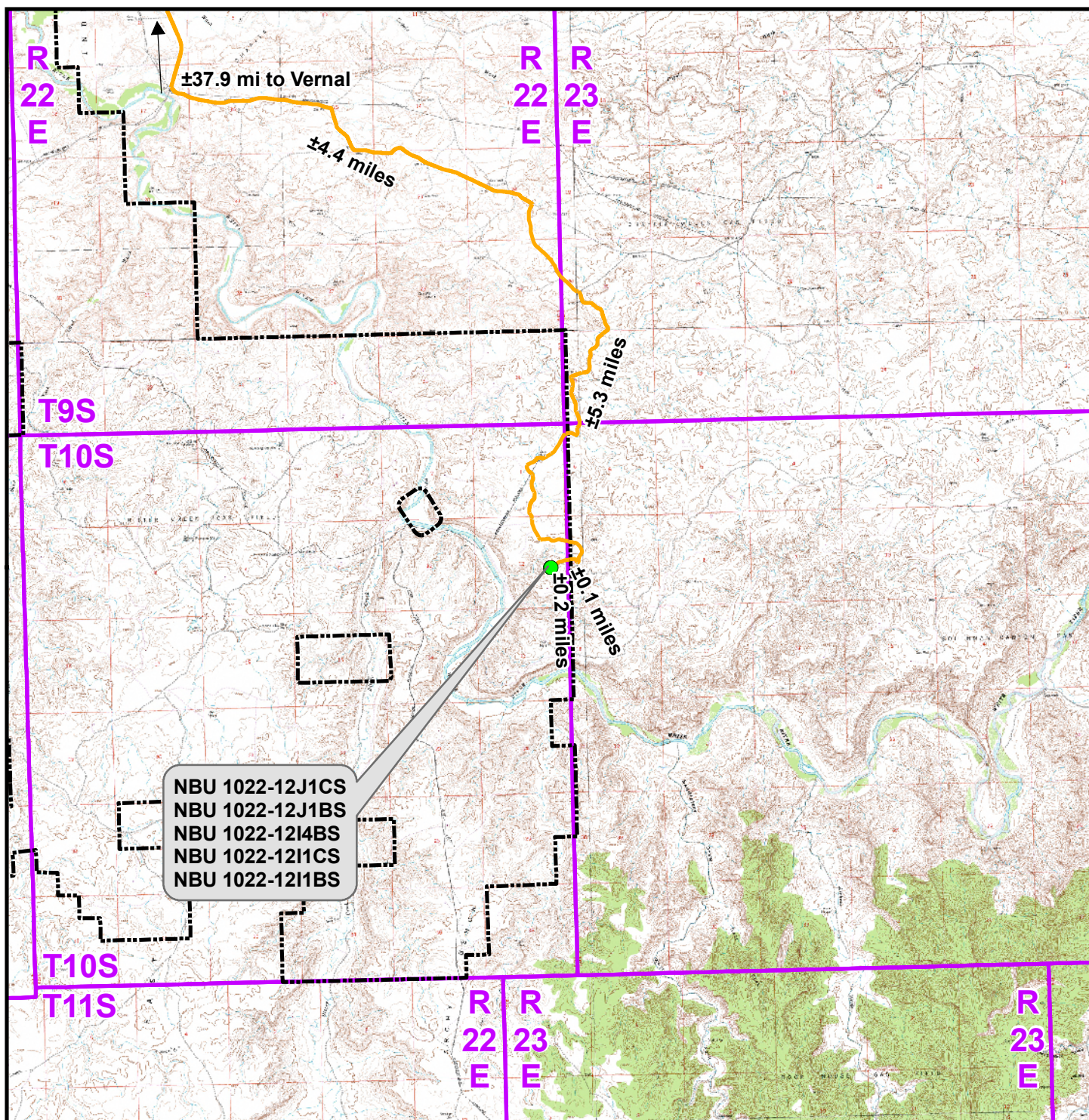
(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 01-20-11	PHOTOS TAKEN BY: R.Y.	<b>10</b> 10 OF 17
DATE DRAWN: 02-03-11	DRAWN BY: M.W.W.	
Date Last Revised:		

**RECEIVED: September 13, 2011**





### Legend

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - NBU 1022-12I To Unit Boundary: ±974ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - NBU 1022-12I

TOPO A  
NBU 1022-12J1CS,  
NBU 1022-12J1BS, NBU 1022-12I4BS,  
NBU 1022-12I1CS & NBU 1022-12I1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH



**609 CONSULTING, LLC**  
2155 North Main Street  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



Scale: 1:100,000

NAD83 USP Central

Sheet No:

Drawn: TL  
Revised:

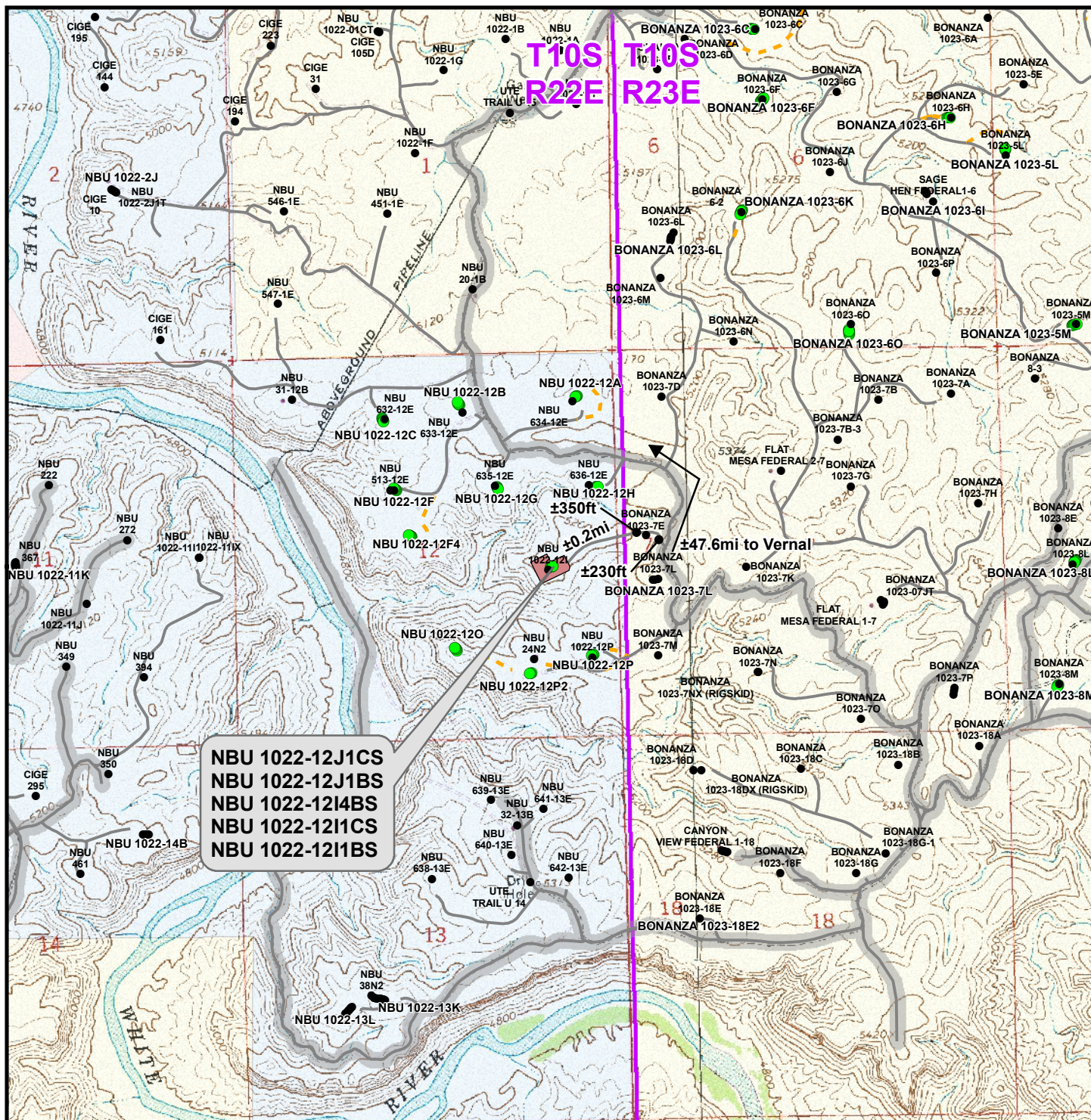
Date: 8 Mar 2011  
Date:

**11**

11 of 17

**RECEIVED: September 13, 2011**





### Legend

- |                   |                   |                      |               |                             |         |
|-------------------|-------------------|----------------------|---------------|-----------------------------|---------|
| ● Well - Proposed | ■ Well Pad        | --- Road - Proposed  | — County Road | ■ Bureau of Land Management | ■ State |
| ● Well - Existing | — Road - Existing | ■ Indian Reservation | ■ Private     |                             |         |

Total Proposed Road Length: ±0ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**WELL PAD - NBU 1022-12I**

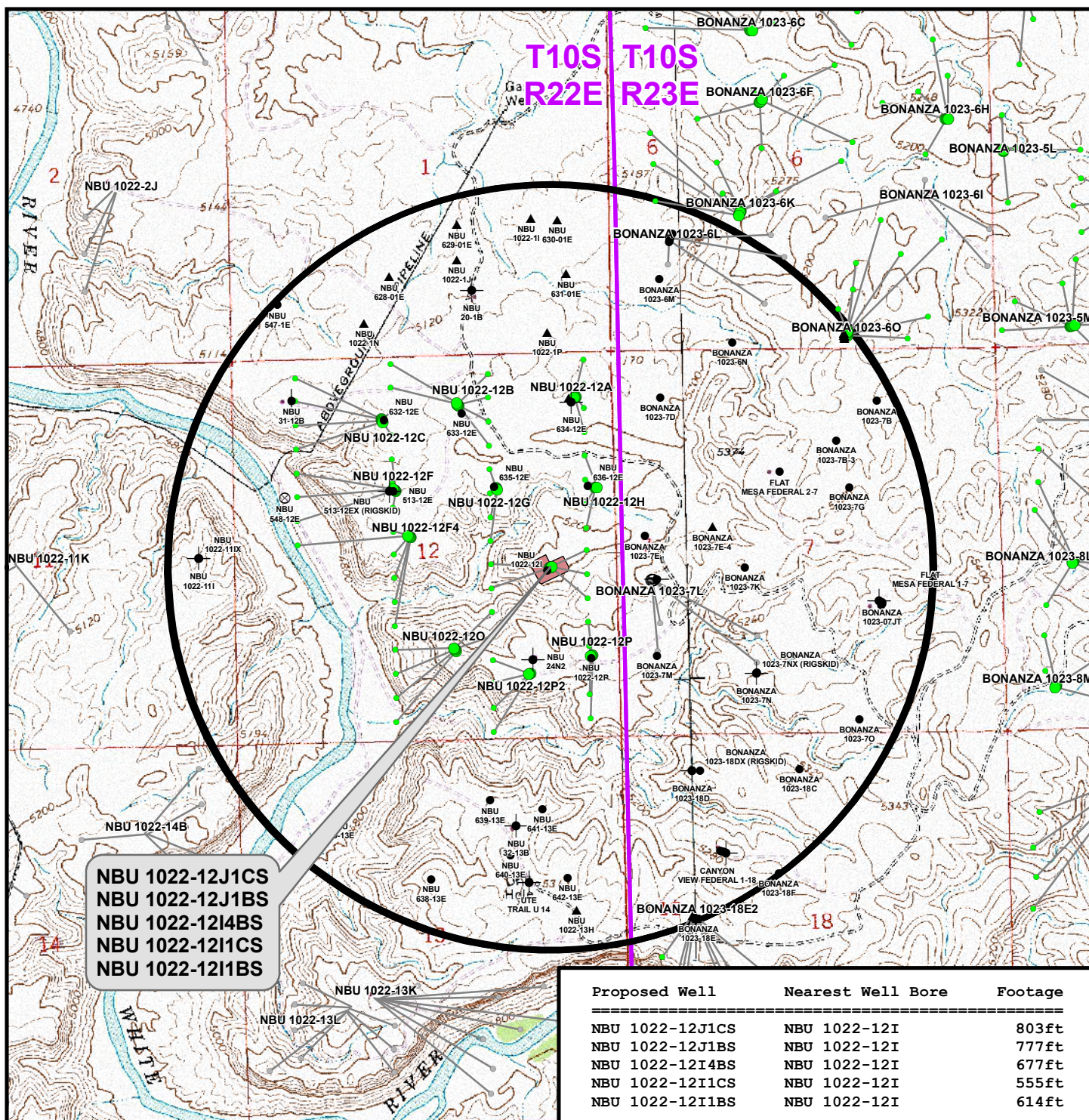
**TOPO B**  
**NBU 1022-12J1CS,**  
**NBU 1022-12J1BS, NBU 1022-12I4BS,**  
**NBU 1022-12I1CS & NBU 1022-12I1BS**  
**LOCATED IN SECTION 12, T10S, R22E,**  
**S.L.B.&M., UTAH COUNTY, UTAH**



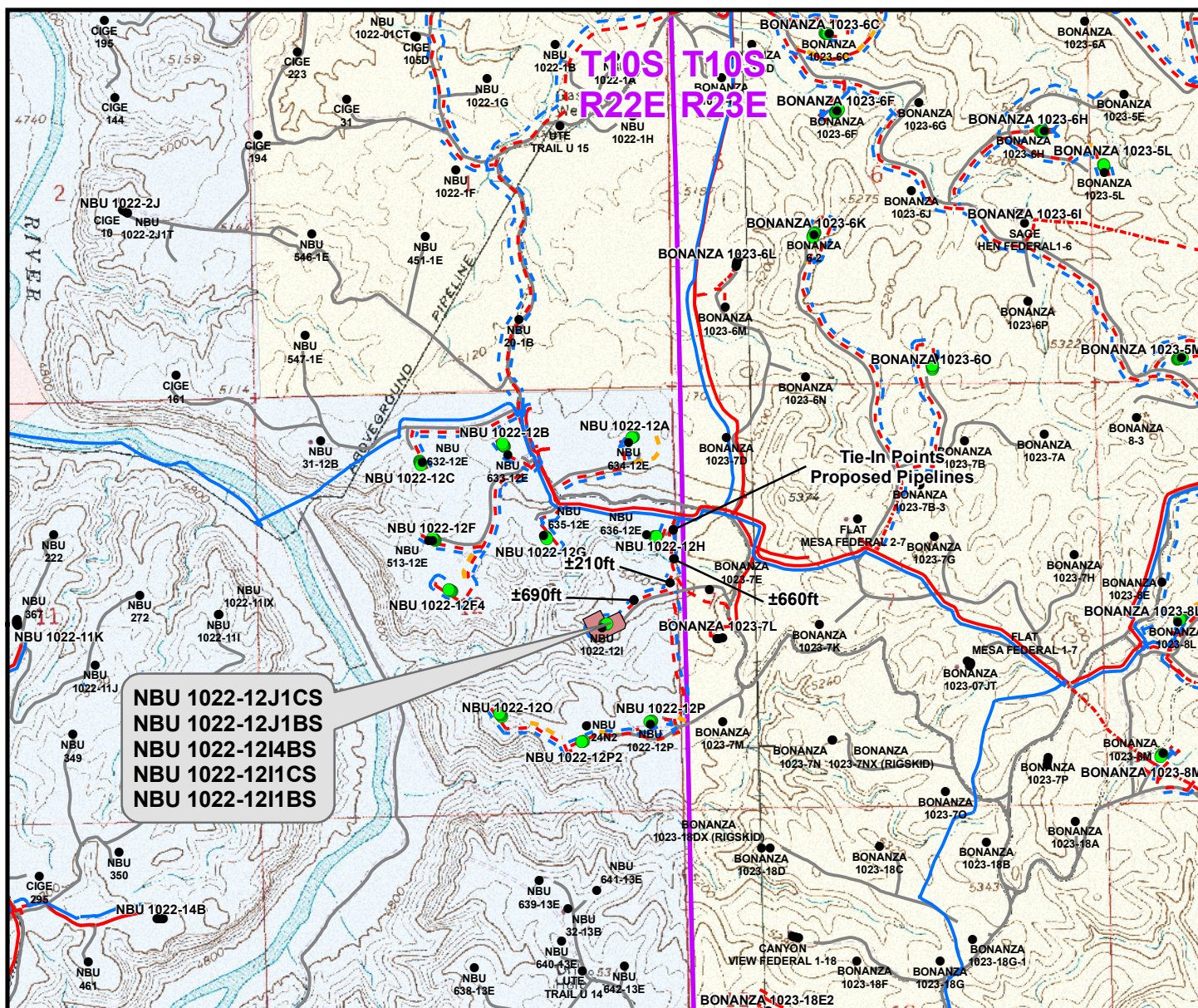
Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 8 Mar 2011	<b>12</b> 12 of 17
Revised:	Date:	

**RECEIVED: September 13, 2011**









Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±460ft
Proposed 6" (Max.) (Edge of Pad to 12P Intersection)	±690ft
Proposed 6" (Max.) (12P Intersection to 7L Intersection)	±210ft
Proposed 6" (Max.) (7L Intersection to 12H Intersection)	±660ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±2,020ft</b>

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±460ft
Proposed 6" (Edge of Pad to 12P Intersection)	±690ft
Proposed 12" (12P Intersection to 7L Intersection)	±210ft
Proposed 12" (7L Intersection to 12H Intersection)	±660ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±2,020ft</b>

### Legend

- Well - Proposed
- Well - Existing
- Well Pad
- - - Gas Pipeline - Proposed
- . - Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- - - Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**WELL PAD - NBU 1022-12I**

**TOPO D**  
**NBU 1022-12J1CS,**  
**NBU 1022-12J1BS, NBU 1022-12I4BS,**  
**NBU 1022-12I1CS & NBU 1022-12I1BS**  
**LOCATED IN SECTION 12, T10S, R22E,**  
**S.L.B.&M., UTAH COUNTY, UTAH**

**609**  
**CONSULTING, LLC**  
2155 North Main Street  
Sheridan, WY 82801  
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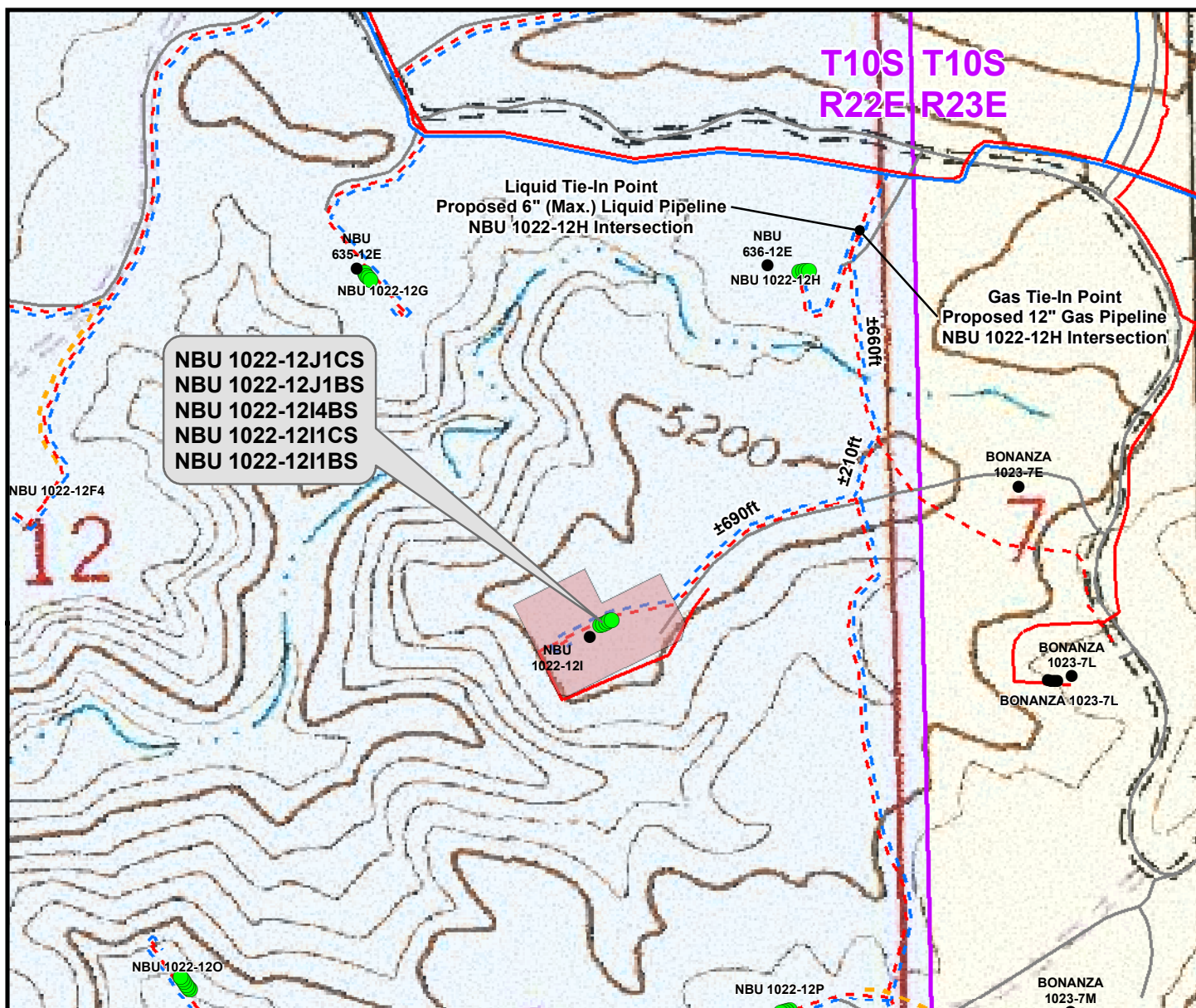


Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: 14 of 17

Drawn: TL | Date: 8 Mar 2011  
Revised: | Date:

**RECEIVED: September 13, 2011**





Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±460ft
Proposed 6" (Max.) (Edge of Pad to 12P Intersection)	±690ft
Proposed 6" (Max.) (12P Intersection to 7L Intersection)	±210ft
Proposed 6" (Max.) (7L Intersection to 12H Intersection)	±660ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±2,020ft</b>

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±460ft
Proposed 6" (Edge of Pad to 12P Intersection)	±690ft
Proposed 12" (12P Intersection to 7L Intersection)	±210ft
Proposed 12" (7L Intersection to 12H Intersection)	±660ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±2,020ft</b>

### Legend

- Well - Proposed
- Well - Existing
- Well Pad
- - - Gas Pipeline - Proposed
- - - Gas Pipeline - To Be Upgraded
- - - Gas Pipeline - Existing
- - - Liquid Pipeline - Proposed
- - - Liquid Pipeline - Existing
- - - Road - Proposed
- - - Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - NBU 1022-12I

### TOPO D2 (PAD & PIPELINE DETAIL)

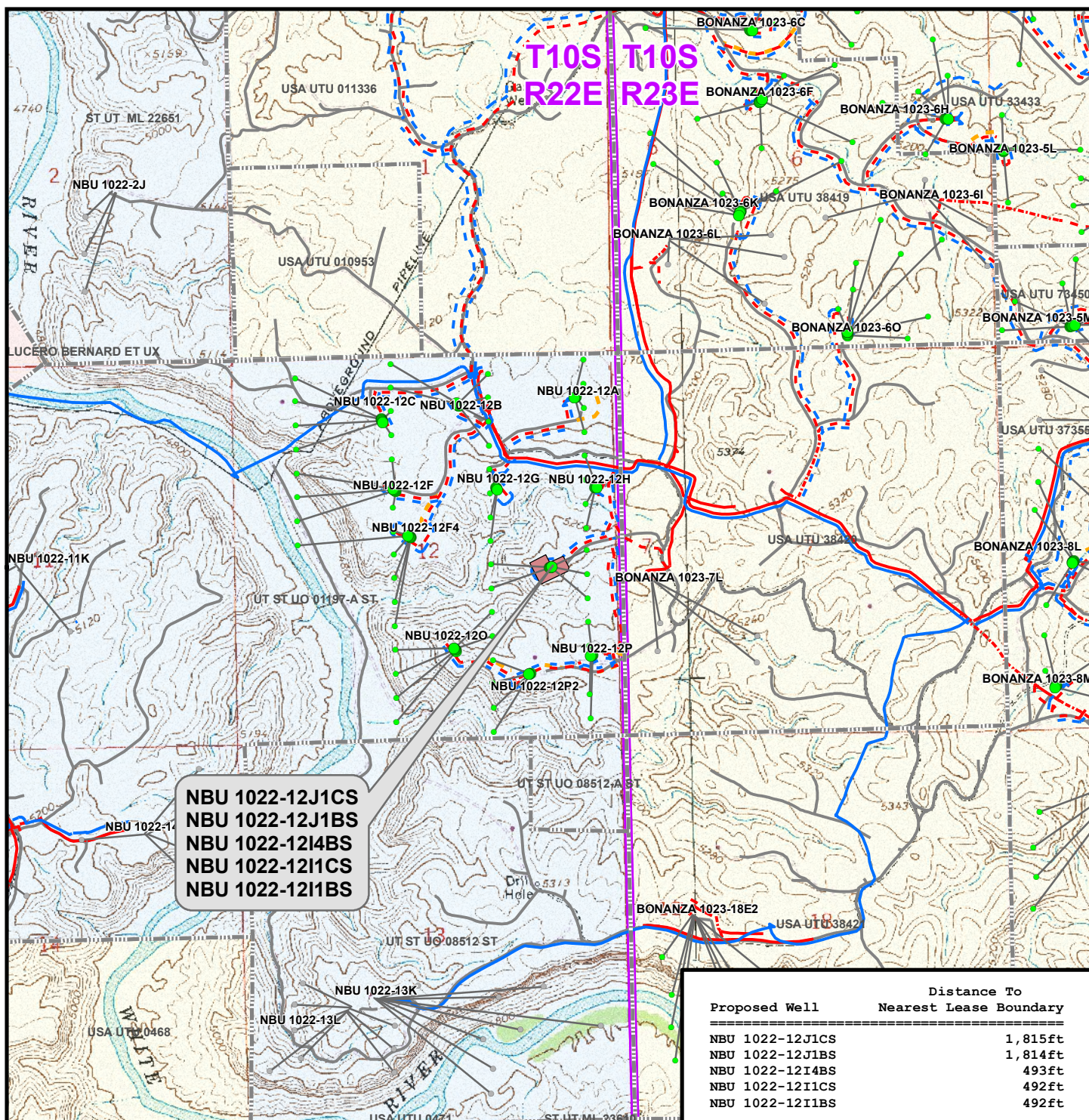
NBU 1022-12J1CS,  
NBU 1022-12J1BS, NBU 1022-12I4BS,  
NBU 1022-12I1CS & NBU 1022-12I1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH



Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 8 Mar 2011	<b>15</b> 15 of 17
Revised:	Date:	

**RECEIVED: September 13, 2011**





# Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

## **WELL PAD - NBU 1022-12I**

**TOPO E**  
NBU 1022-12J1CS,  
NBU 1022-12J1BS, NBU 1022-12I4BS,  
NBU 1022-12I1CS & NBU 1022-12I1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH

**609**  
**CONSULTING, LLC**  
2155 North Main Street  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No:  
Drawn: TL | Date: 8 Mar 2011 | **16**  
Revised: | Date: | 16 of 17

**RECEIVED: September 13, 2011**



**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 1022-12I  
WELLS – NBU 1022-12J1CS,  
NBU 1022-12J1BS, NBU 1022-12I4BS,  
NBU 1022-12I1CS & NBU 1022-12I1BS  
Section 12, T10S, R22E, S.L.B.&M.**

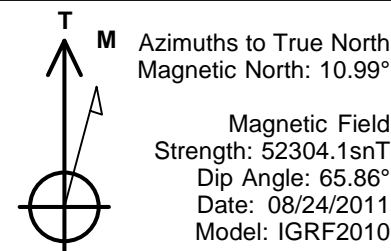
From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 14.4 miles to the intersection of the Fidlar Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge at the White River. Exit left and proceed in a southeasterly direction along the Fidlar Road approximately 4.4 miles to the intersection of the Seven Sisters Road (County B Road 3420). Exit right and proceed in a southeasterly, then southerly direction along the Seven Sisters Road approximately 5.3 miles to a service road to the northwest. Exit right and proceed in a northwesterly direction along the service road approximately 230 feet to the existing Bonanza 1023-7E well pad. Continue in a westerly direction through the existing Bonanza 1023-7E well pad approximately 350 feet to a second service road to the southwest. Proceed in a southwesterly direction along the second service road approximately 0.2 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.9 miles in a southerly direction.

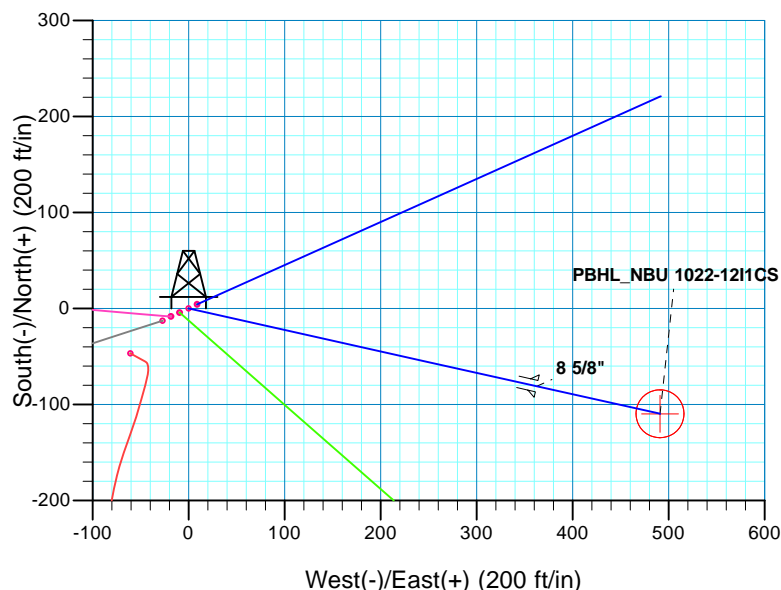
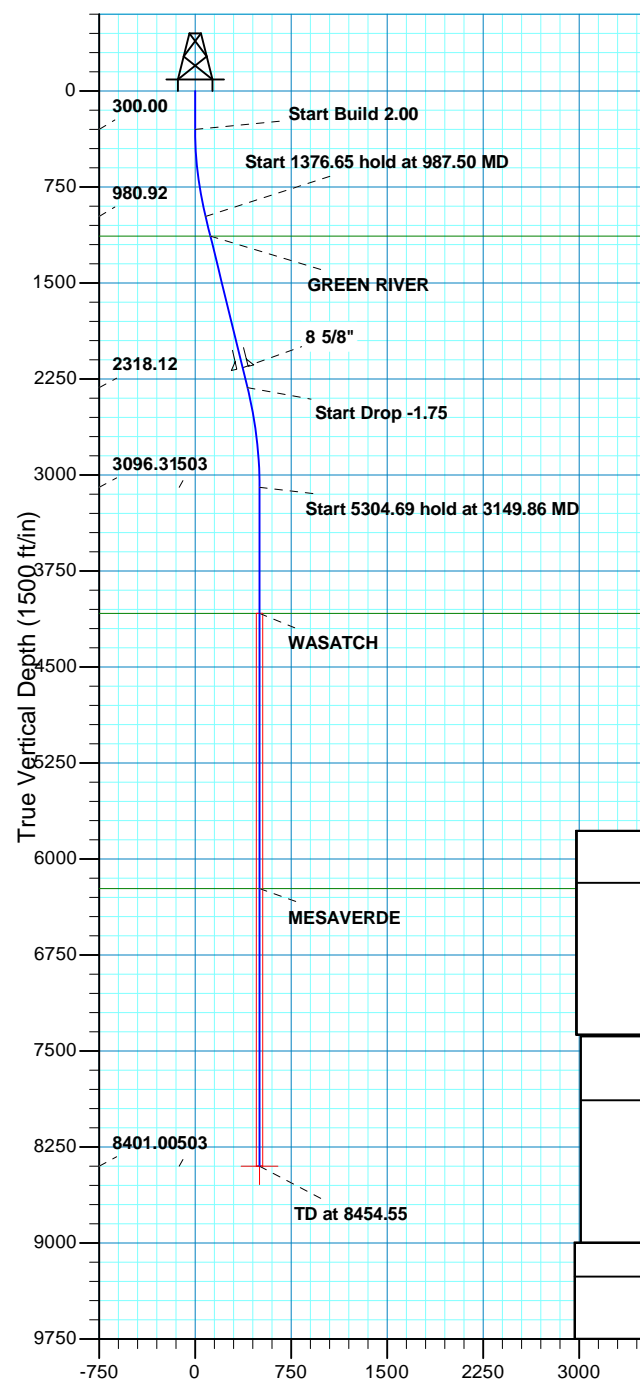
API Well Number: 43047519780000



Project: UTAH - UTM (feet), NAD27, Zone 12N  
 Site: NBU 1022-12I PAD  
 Well: NBU 1022-12I CS  
 Wellbore: OH  
 Design: PLAN #1 PRELIMINARY



WELL DETAILS: NBU 1022-12I CS								
GL 5222 & KB 4 @ 5226.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14516559.07	2093896.15	39° 57' 45.551 N	109° 22' 54.073 W			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8401.00	-109.63	491.05	14516458.38	2094389.10	39° 57' 44.467 N	109° 22' 47.766 W	Circle (Radius: 25.00)
- plan hits target center								



SECTION DETAILS									
	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
	987.50	13.75	102.58	980.92	-17.89	80.13	2.00	102.58	82.10
	2364.15	13.75	102.58	2318.12	-89.18	399.47	0.00	0.00	409.31
	3149.86	0.00	0.00	3096.31	-109.63	491.05	1.75	180.00	503.14
	8454.55	0.00	0.00	8401.00	-109.63	491.05	0.00	0.00	503.14
PBHL_NBU 1022-12I\CS									
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N							FORMATION TOP DETAILS		
							TVDPath	MDPath	Formation
Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 12 T10S R22E System Datum: Mean Sea Level							1135.00	1146.13	GREEN RIVER
							4082.00	4135.55	WASATCH
							6232.00	6285.55	MESAVERDE
CASING DETAILS									
	TVD	MD	Name	Size					
	2164.00	2205.49	8 5/8"	8.625					

Plan: PLAN #1 PRELIMINARY (NBU 1022-12I CS/OH)

Created By: RobertScott Date: 14:27, August 24 2011

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# **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**NBU 1022-12I PAD**

**NBU 1022-12I1CS**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**24 August, 2011**





# SDI Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-1211CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5222 & KB 4 @ 5226.00ft (ASSSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5222 & KB 4 @ 5226.00ft (ASSSUMED)
<b>Site:</b>	NBU 1022-12I PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-1211CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 1022-12I PAD, SECTION 12 T10S R22E		
<b>Site Position:</b>		<b>Northing:</b>	14,516,563.61 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,093,905.03 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in
		<b>Grid Convergence:</b>	1.04 °

<b>Well</b>	NBU 1022-1211CS, 2345 FSL 984 FEL		
<b>Well Position</b>	<b>+N/-S</b>	-4.37 ft	<b>Northing:</b> 14,516,559.08 usft
	<b>+E/-W</b>	-8.97 ft	<b>Easting:</b> 2,093,896.15 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	5,222.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	08/24/11	11.00	65.86	52,304

<b>Design</b>	PLAN #1 PRELIMINARY			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	102.58

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
987.50	13.75	102.58	980.92	-17.89	80.13	2.00	2.00	0.00	102.58	
2,364.15	13.75	102.58	2,318.12	-89.18	399.47	0.00	0.00	0.00	0.00	
3,149.86	0.00	0.00	3,096.31	-109.63	491.05	1.75	-1.75	0.00	180.00	
8,454.55	0.00	0.00	8,401.00	-109.63	491.05	0.00	0.00	0.00	0.00	PBHL_NBU 1022-12I



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-1211CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5222 & KB 4 @ 5226.00ft (ASSSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5222 & KB 4 @ 5226.00ft (ASSSUMED)
<b>Site:</b>	NBU 1022-12I PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-1211CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
400.00	2.00	102.58	399.98	-0.38	1.70	1.75	2.00	2.00	0.00
500.00	4.00	102.58	499.84	-1.52	6.81	6.98	2.00	2.00	0.00
600.00	6.00	102.58	599.45	-3.42	15.32	15.69	2.00	2.00	0.00
700.00	8.00	102.58	698.70	-6.07	27.21	27.88	2.00	2.00	0.00
800.00	10.00	102.58	797.47	-9.48	42.48	43.52	2.00	2.00	0.00
900.00	12.00	102.58	895.62	-13.64	61.10	62.60	2.00	2.00	0.00
987.50	13.75	102.58	980.92	-17.89	80.13	82.10	2.00	2.00	0.00
<b>Start 1376.65 hold at 987.50 MD</b>									
1,000.00	13.75	102.58	993.06	-18.54	83.03	85.07	0.00	0.00	0.00
1,100.00	13.75	102.58	1,090.20	-23.71	106.22	108.84	0.00	0.00	0.00
1,146.13	13.75	102.58	1,135.00	-26.10	116.92	119.80	0.00	0.00	0.00
<b>GREEN RIVER</b>									
1,200.00	13.75	102.58	1,187.33	-28.89	129.42	132.61	0.00	0.00	0.00
1,300.00	13.75	102.58	1,284.46	-34.07	152.62	156.38	0.00	0.00	0.00
1,400.00	13.75	102.58	1,381.60	-39.25	175.82	180.14	0.00	0.00	0.00
1,500.00	13.75	102.58	1,478.73	-44.43	199.01	203.91	0.00	0.00	0.00
1,600.00	13.75	102.58	1,575.87	-49.61	222.21	227.68	0.00	0.00	0.00
1,700.00	13.75	102.58	1,673.00	-54.79	245.41	251.45	0.00	0.00	0.00
1,800.00	13.75	102.58	1,770.14	-59.97	268.61	275.22	0.00	0.00	0.00
1,900.00	13.75	102.58	1,867.27	-65.14	291.80	298.99	0.00	0.00	0.00
2,000.00	13.75	102.58	1,964.40	-70.32	315.00	322.76	0.00	0.00	0.00
2,100.00	13.75	102.58	2,061.54	-75.50	338.20	346.52	0.00	0.00	0.00
2,200.00	13.75	102.58	2,158.67	-80.68	361.40	370.29	0.00	0.00	0.00
2,205.49	13.75	102.58	2,164.00	-80.97	362.67	371.60	0.00	0.00	0.00
<b>8 5/8"</b>									
2,300.00	13.75	102.58	2,255.81	-85.86	384.59	394.06	0.00	0.00	0.00
2,364.15	13.75	102.58	2,318.12	-89.18	399.47	409.31	0.00	0.00	0.00
<b>Start Drop -1.75</b>									
2,400.00	13.12	102.58	2,352.99	-91.00	407.61	417.64	1.75	-1.75	0.00
2,500.00	11.37	102.58	2,450.71	-95.62	428.31	438.85	1.75	-1.75	0.00
2,600.00	9.62	102.58	2,549.03	-99.59	446.09	457.07	1.75	-1.75	0.00
2,700.00	7.87	102.58	2,647.86	-102.90	460.93	472.28	1.75	-1.75	0.00
2,800.00	6.12	102.58	2,747.11	-105.56	472.82	484.46	1.75	-1.75	0.00
2,900.00	4.37	102.58	2,846.69	-107.55	481.75	493.61	1.75	-1.75	0.00
3,000.00	2.62	102.58	2,946.50	-108.88	487.70	499.71	1.75	-1.75	0.00
3,100.00	0.87	102.58	3,046.45	-109.54	490.68	502.76	1.75	-1.75	0.00
3,149.86	0.00	0.00	3,096.31	-109.63	491.05	503.14	1.75	-1.75	0.00
<b>Start 5304.69 hold at 3149.86 MD</b>									
3,200.00	0.00	0.00	3,146.45	-109.63	491.05	503.14	0.00	0.00	0.00
3,300.00	0.00	0.00	3,246.45	-109.63	491.05	503.14	0.00	0.00	0.00
3,400.00	0.00	0.00	3,346.45	-109.63	491.05	503.14	0.00	0.00	0.00
3,500.00	0.00	0.00	3,446.45	-109.63	491.05	503.14	0.00	0.00	0.00
3,600.00	0.00	0.00	3,546.45	-109.63	491.05	503.14	0.00	0.00	0.00
3,700.00	0.00	0.00	3,646.45	-109.63	491.05	503.14	0.00	0.00	0.00
3,800.00	0.00	0.00	3,746.45	-109.63	491.05	503.14	0.00	0.00	0.00
3,900.00	0.00	0.00	3,846.45	-109.63	491.05	503.14	0.00	0.00	0.00



**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-1211CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5222 & KB 4 @ 5226.00ft (ASSSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5222 & KB 4 @ 5226.00ft (ASSSUMED)
<b>Site:</b>	NBU 1022-12I PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-1211CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,000.00	0.00	0.00	3,946.45	-109.63	491.05	503.14	0.00	0.00	0.00
4,100.00	0.00	0.00	4,046.45	-109.63	491.05	503.14	0.00	0.00	0.00
4,135.55	0.00	0.00	4,082.00	-109.63	491.05	503.14	0.00	0.00	0.00
<b>WASATCH</b>									
4,200.00	0.00	0.00	4,146.45	-109.63	491.05	503.14	0.00	0.00	0.00
4,300.00	0.00	0.00	4,246.45	-109.63	491.05	503.14	0.00	0.00	0.00
4,400.00	0.00	0.00	4,346.45	-109.63	491.05	503.14	0.00	0.00	0.00
4,500.00	0.00	0.00	4,446.45	-109.63	491.05	503.14	0.00	0.00	0.00
4,600.00	0.00	0.00	4,546.45	-109.63	491.05	503.14	0.00	0.00	0.00
4,700.00	0.00	0.00	4,646.45	-109.63	491.05	503.14	0.00	0.00	0.00
4,800.00	0.00	0.00	4,746.45	-109.63	491.05	503.14	0.00	0.00	0.00
4,900.00	0.00	0.00	4,846.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,000.00	0.00	0.00	4,946.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,100.00	0.00	0.00	5,046.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,200.00	0.00	0.00	5,146.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,300.00	0.00	0.00	5,246.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,400.00	0.00	0.00	5,346.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,500.00	0.00	0.00	5,446.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,600.00	0.00	0.00	5,546.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,700.00	0.00	0.00	5,646.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,800.00	0.00	0.00	5,746.45	-109.63	491.05	503.14	0.00	0.00	0.00
5,900.00	0.00	0.00	5,846.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,000.00	0.00	0.00	5,946.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,100.00	0.00	0.00	6,046.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,200.00	0.00	0.00	6,146.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,285.55	0.00	0.00	6,232.00	-109.63	491.05	503.14	0.00	0.00	0.00
<b>MESAVERDE</b>									
6,300.00	0.00	0.00	6,246.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,400.00	0.00	0.00	6,346.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,500.00	0.00	0.00	6,446.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,600.00	0.00	0.00	6,546.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,700.00	0.00	0.00	6,646.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,800.00	0.00	0.00	6,746.45	-109.63	491.05	503.14	0.00	0.00	0.00
6,900.00	0.00	0.00	6,846.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,000.00	0.00	0.00	6,946.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,100.00	0.00	0.00	7,046.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,200.00	0.00	0.00	7,146.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,300.00	0.00	0.00	7,246.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,400.00	0.00	0.00	7,346.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,500.00	0.00	0.00	7,446.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,600.00	0.00	0.00	7,546.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,700.00	0.00	0.00	7,646.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,800.00	0.00	0.00	7,746.45	-109.63	491.05	503.14	0.00	0.00	0.00
7,900.00	0.00	0.00	7,846.45	-109.63	491.05	503.14	0.00	0.00	0.00
8,000.00	0.00	0.00	7,946.45	-109.63	491.05	503.14	0.00	0.00	0.00
8,100.00	0.00	0.00	8,046.45	-109.63	491.05	503.14	0.00	0.00	0.00
8,200.00	0.00	0.00	8,146.45	-109.63	491.05	503.14	0.00	0.00	0.00
8,300.00	0.00	0.00	8,246.45	-109.63	491.05	503.14	0.00	0.00	0.00
8,400.00	0.00	0.00	8,346.45	-109.63	491.05	503.14	0.00	0.00	0.00
8,454.55	0.00	0.00	8,401.00	-109.63	491.05	503.14	0.00	0.00	0.00
<b>TD at 8454.55 - PBHL_NBU 1022-1211CS</b>									

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-1211CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5222 & KB 4 @ 5226.00ft (ASSSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5222 & KB 4 @ 5226.00ft (ASSSUMED)
<b>Site:</b>	NBU 1022-12I PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-1211CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-1211C - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,401.00	-109.63	491.05	14,516,458.38	2,094,389.10	39° 57' 44.467 N	109° 22' 47.766 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,205.49	2,164.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,146.13	1,135.00	GREEN RIVER			
4,135.55	4,082.00	WASATCH			
6,285.55	6,232.00	MESAVERDE			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
987.50	980.92	-17.89	80.13	Start 1376.65 hold at 987.50 MD
2,364.15	2,318.12	-89.18	399.47	Start Drop -1.75
3,149.86	3,096.31	-109.63	491.05	Start 5304.69 hold at 3149.86 MD
8,454.55	8,401.00	-109.63	491.05	TD at 8454.55

NBU 1022-12I1BS/ 1022-12I1CS/  
1022-12I4BS/ 1022-12J1BS/ 1022-12J1CS

Surface Use Plan of Operations  
1 of 9

<b>NBU 1022-12I1BS</b>			
Surface:	2350 FSL / 974 FEL	NESE	Lot
BHL:	2568 FSL / 492 FEL	NESE	Lot
<b>NBU 1022-12I1CS</b>			
Surface:	2345 FSL / 984 FEL	NESE	Lot
BHL:	2237 FSL / 492 FEL	NESE	Lot
<b>NBU 1022-12I4BS</b>			
Surface:	2341 FSL / 993 FEL	NESE	Lot
BHL:	1905 FSL / 493 FEL	NESE	Lot
<b>NBU 1022-12J1BS</b>			
Surface:	2337 FSL / 1002 FEL	NESE	Lot
BHL:	2402 FSL / 1814 FEL	NWSE	Lot
<b>NBU 1022-12J1CS</b>			
Surface:	2333 FSL / 1011 FEL	NESE	Lot
BHL:	2071 FSL / 1815 FEL	NWSE	Lot

**Pad: NBU 1022-12I PAD**

Section 12 T10S R22E

Mineral Lease: UT ST UO 01197-A ST

Uintah County, Utah

Operator: Kerr-McGee Oil & Gas Onshore LP

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including but not limited to, APDs/SULAs/ROEs/ROWs and/or easements.)

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

**A. Existing Roads:**

Existing roads consist of county and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance



of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

**B. Planned Access Roads:**

No new access road is proposed. (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

**C. Location of Existing and Proposed Facilities:**

This pad will expand the existing pad for the NBU 1022-12I. The NBU 1022-12I well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of September 8, 2011

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

**Gathering Facilities:**

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 2,020'$  and the individual segments are broken up as follows:

- ±460' (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±690' (0.1 miles) –New 6" buried gas pipeline from the edge of pad to the tie-in at the proposed 1022-12P Intersection 12" gas pipeline. Please refer to Topo D & D2.
- ±210' (0.04 miles) –New 12" buried gas pipeline from the proposed 1022-12P Intersection 12" gas pipeline to the tie-in at the proposed 1023-7L Intersection 12" gas pipeline. Please refer to Topo D & D2.
- ±660' (0.1 miles) –New 12" buried gas pipeline from the proposed 1023-7L Intersection 12" gas pipeline to the tie-in at the proposed 1022-12H Intersection 12" gas pipeline. Please refer to Topo D & D2.

The total liquid gathering pipeline distance from the separator to the tie in point is ±2,020' and the individual segments are broken up as follows:

- ±460' (0.1 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±690' (0.1 miles) –New 6" buried liquid pipeline from the edge of pad to the tie-in at the proposed 1022-12P Intersection 6" liquid pipeline. Please refer to Topo D & D2.
- ±210' (0.04 miles) –New 6" buried liquid pipeline from the tie-in at the proposed 1022-12P Intersection 6" liquid pipeline to the tie-in at the proposed 1023-7L Intersection 6" liquid pipeline. Please refer to Topo D & D2.
- ±660' (0.13 miles) –New 6" buried liquid pipeline from the tie-in at the proposed 1023-7L Intersection 6" liquid pipeline to the tie-in at the proposed 1022-12H Intersection 6" liquid pipeline. Please refer to Topo D & D2.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

**D. Location and Type of Water Supply:**

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

**E. Source of Construction Materials:**

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

**F. Methods for Handling Waste Materials:**

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E  
Ouray #1 SWD in Sec. 1 T9S R21E  
NBU 159 SWD in Sec. 35 T9S R21E  
CIGE 112D SWD in Sec. 19 T9S R21E  
CIGE 114 SWD in Sec. 34 T9S R21E  
NBU 921-34K SWD in Sec. 34 T9S R21E  
NBU 921-33F SWD in Sec. 33 T9S R21E  
NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification.)

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20 mil or thicker. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

**Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

**G. Ancillary Facilities:**

None are anticipated.

**H. Well Site Layout (see Well Pad Design Summary):**

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

**I. Plans for Reclamation of the Surface:**

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

**Interim Reclamation**

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

### **Final Reclamation**

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

### **Seeding and Measures Common to Interim and Final Reclamation**

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

NBU 1022-12I1BS/ 1022-12I1CS/  
1022-12I4BS/ 1022-12J1BS/ 1022-12J1CS

Surface Use Plan of Operations  
8 of 9

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

**J. Surface/Mineral Ownership:**

SITLA  
675 East 500 South, Suite 500  
Salt Lake City, UT 84102

**L. Other Information:**

None



NBU 1022-12I1BS/ 1022-12I1CS/  
1022-12I4BS/ 1022-12J1BS/ 1022-12J1CS

Surface Use Plan of Operations  
9 of 9

**M. Lessee's or Operators' Representative & Certification:**

Gina T. Becker  
Regulatory Analyst II  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6086

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Gina T. Becker

September 8, 2011  
Date





Joseph D. Johnson  
1099 18TH STREET STE. 1800 • DENVER, CO  
80202  
720-929-6708 • FAX 720-929-7708  
E-MAIL: JOE.JOHNSON@ANADARKO.COM

September 7, 2011

Ms. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11  
NBU 1022-12I1CS  
10S-22E-Sec. 12  
NESE/NESE  
Surface: 2345' FSL, 984' FEL  
Bottom Hole: 2237' FSL, 492' FEL  
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-12I1CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

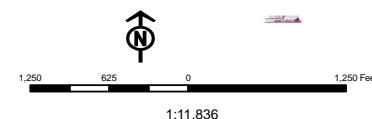
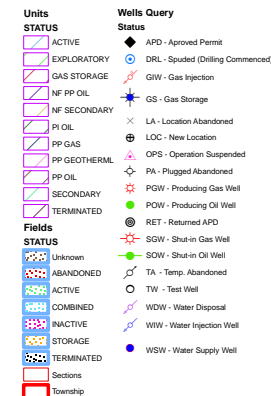
KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'JDJ', with a horizontal line underneath.

Joseph D. Johnson  
Landman

**RECEIVED: September 13, 2011**

Map Produced by Diana Mason



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

September 19, 2011

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2011 Plan of Development Natural Buttes Unit  
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2011 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

**NBU 1022-12H PAD**

43-047-51941	NBU 1022-12H4BS	Sec 12 T10S R22E 1846 FNL 0361 FEL
	BHL	Sec 12 T10S R22E 2071 FNL 0491 FEL

43-047-51942	NBU 1022-12H1CS	Sec 12 T10S R22E 1843 FNL 0341 FEL
	BHL	Sec 12 T10S R22E 1740 FNL 0491 FEL

43-047-51973	NBU 1022-12H1BS	Sec 12 T10S R22E 1842 FNL 0331 FEL
	BHL	Sec 12 T10S R22E 1408 FNL 0491 FEL

43-047-51975	NBU 1022-12H4CS	Sec 12 T10S R22E 1845 FNL 0351 FEL
	BHL	Sec 12 T10S R22E 2402 FNL 0492 FEL

**NBU 1022-12O PAD**

43-047-51943	NBU 1022-12N4BS	Sec 12 T10S R22E 1224 FSL 2329 FEL
	BHL	Sec 12 T10S R22E 0580 FSL 2150 FWL

43-047-51945	NBU 1022-12N4CS	Sec 12 T10S R22E 1216 FSL 2323 FEL
	BHL	Sec 12 T10S R22E 0251 FSL 2141 FWL

43-047-51956	NBU 1022-12J4CS	Sec 12 T10S R22E 1240 FSL 2341 FEL
	BHL	Sec 12 T10S R22E 1409 FSL 1817 FEL

43-047-51959	NBU 1022-12N1BS	Sec 12 T10S R22E 1257 FSL 2352 FEL
	BHL	Sec 12 T10S R22E 1242 FSL 2147 FWL

43-047-51960	NBU 1022-12J4BS	Sec 12 T10S R22E 1249 FSL 2346 FEL
	BHL	Sec 12 T10S R22E 1740 FSL 1816 FEL

**RECEIVED: September 20, 2011**

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51961	NBU 1022-12N1CS	Sec 12 T10S R22E 1232 FSL 2335 FEL
	BHL	Sec 12 T10S R22E 0911 FSL 2149 FWL
<b>NBU 1022-12B PAD</b>		
43-047-51944	NBU 1022-12B1BS	Sec 12 T10S R22E 0668 FNL 2232 FEL
	BHL	Sec 12 T10S R22E 0259 FNL 1797 FEL
43-047-51979	NBU 1022-12C1BS	Sec 12 T10S R22E 0651 FNL 2244 FEL
	BHL	Sec 12 T10S R22E 0089 FNL 2138 FWL
43-047-51980	NBU 1022-12B1CS	Sec 12 T10S R22E 0676 FNL 2227 FEL
	BHL	Sec 12 T10S R22E 0579 FNL 1806 FEL
43-047-51981	NBU 1022-12C1CS	Sec 12 T10S R22E 0660 FNL 2238 FEL
	BHL	Sec 12 T10S R22E 0414 FNL 2133 FWL
43-047-51982	NBU 1022-12B4BS	Sec 12 T10S R22E 0684 FNL 2221 FEL
	BHL	Sec 12 T10S R22E 0910 FNL 1807 FEL
43-047-51983	NBU 1022-12B4CS	Sec 12 T10S R22E 0692 FNL 2215 FEL
	BHL	Sec 12 T10S R22E 1241 FNL 1808 FEL
<b>NBU 1022-12P PAD</b>		
43-047-51947	NBU 1022-12P4CS	Sec 12 T10S R22E 1115 FSL 0442 FEL
	BHL	Sec 12 T10S R22E 0246 FSL 0491 FEL
43-047-51962	NBU 1022-12I4CS	Sec 12 T10S R22E 1112 FSL 0451 FEL
	BHL	Sec 12 T10S R22E 1574 FSL 0493 FEL
43-047-51968	NBU 1022-12P1BS	Sec 12 T10S R22E 1109 FSL 0461 FEL
	BHL	Sec 12 T10S R22E 1240 FSL 0489 FEL
43-047-51969	NBU 1022-12P4BS	Sec 12 T10S R22E 1105 FSL 0470 FEL
	BHL	Sec 12 T10S R22E 0580 FSL 0494 FEL
<b>NBU 1022-12P2 PAD</b>		
43-047-51949	NBU 1022-12O1BS	Sec 12 T10S R22E 0877 FSL 1322 FEL
	BHL	Sec 12 T10S R22E 1077 FSL 1818 FEL
43-047-51950	NBU 1022-12O1CS	Sec 12 T10S R22E 0873 FSL 1331 FEL
	BHL	Sec 12 T10S R22E 0761 FSL 1834 FEL
43-047-51953	NBU 1022-12O4BS	Sec 12 T10S R22E 0881 FSL 1313 FEL
	BHL	Sec 12 T10S R22E 0415 FSL 1820 FEL
43-047-51954	NBU 1022-12O4CS	Sec 12 T10S R22E 0885 FSL 1304 FEL
	BHL	Sec 12 T10S R22E 0082 FSL 1828 FEL
<b>NBU 1022-12A PAD</b>		
43-047-51951	NBU 1022-12A1BS	Sec 12 T10S R22E 0598 FNL 0621 FEL
	BHL	Sec 12 T10S R22E 0081 FNL 0481 FEL
43-047-51952	NBU 1022-12A1CS	Sec 12 T10S R22E 0591 FNL 0592 FEL
	BHL	Sec 12 T10S R22E 0414 FNL 0490 FEL

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51986	NBU 1022-12A4CS	Sec 12 T10S R22E 0596 FNL 0611 FEL
	BHL	Sec 12 T10S R22E 1077 FNL 0491 FEL
43-047-51991	NBU 1022-12A4BS	Sec 12 T10S R22E 0593 FNL 0601 FEL
	BHL	Sec 12 T10S R22E 0746 FNL 0490 FEL
<b>NBU 1022-12I PAD</b>		
43-047-51955	NBU 1022-12J1CS	Sec 12 T10S R22E 2333 FSL 1011 FEL
	BHL	Sec 12 T10S R22E 2071 FSL 1815 FEL
43-047-51957	NBU 1022-12J1BS	Sec 12 T10S R22E 2337 FSL 1002 FEL
	BHL	Sec 12 T10S R22E 2402 FSL 1814 FEL
43-047-51958	NBU 1022-12I4BS	Sec 12 T10S R22E 2341 FSL 0993 FEL
	BHL	Sec 12 T10S R22E 1905 FSL 0493 FEL
43-047-51976	NBU 1022-12I1BS	Sec 12 T10S R22E 2350 FSL 0974 FEL
	BHL	Sec 12 T10S R22E 2568 FSL 0492 FEL
43-047-51978	NBU 1022-12I1CS	Sec 12 T10S R22E 2345 FSL 0984 FEL
	BHL	Sec 12 T10S R22E 2237 FSL 0492 FEL
<b>NBU 1022-12G PAD</b>		
43-047-51963	NBU 1022-12G1CS	Sec 12 T10S R22E 1833 FNL 1721 FEL
	BHL	Sec 12 T10S R22E 1904 FNL 1810 FEL
43-047-51972	NBU 1022-12G4BS	Sec 12 T10S R22E 1841 FNL 1715 FEL
	BHL	Sec 12 T10S R22E 2235 FNL 1812 FEL
43-047-51974	NBU 1022-12G1BS	Sec 12 T10S R22E 1826 FNL 1727 FEL
	BHL	Sec 12 T10S R22E 1572 FNL 1809 FEL
43-047-51977	NBU 1022-12G4CS	Sec 12 T10S R22E 1849 FNL 1709 FEL
	BHL	Sec 12 T10S R22E 2566 FNL 1813 FEL
<b>NBU 1022-12F4 PAD</b>		
43-047-51964	NBU 1022-12F4CS	Sec 12 T10S R22E 2462 FNL 2342 FWL
	BHL	Sec 12 T10S R22E 2401 FNL 2141 FWL
43-047-51965	NBU 1022-12K1BS	Sec 12 T10S R22E 2473 FNL 2359 FWL
	BHL	Sec 12 T10S R22E 2567 FSL 2142 FWL
43-047-51966	NBU 1022-12K1CS	Sec 12 T10S R22E 2479 FNL 2367 FWL
	BHL	Sec 12 T10S R22E 2236 FSL 2144 FWL
43-047-51967	NBU 1022-12E4CS	Sec 12 T10S R22E 2467 FNL 2350 FWL
	BHL	Sec 12 T10S R22E 2565 FNL 0822 FWL
43-047-51970	NBU 1022-12K4BS	Sec 12 T10S R22E 2484 FNL 2375 FWL
	BHL	Sec 12 T10S R22E 1904 FSL 2145 FWL
43-047-51971	NBU 1022-12K4CS	Sec 12 T10S R22E 2490 FNL 2384 FWL
	BHL	Sec 12 T10S R22E 1573 FSL 2146 FWL



API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

**NBU 1022-12CPAD**

43-047-51984	NBU 1022-12C4BS	Sec 12 T10S R22E 0827 FNL 2020 FWL
	BHL	Sec 12 T10S R22E 0745 FNL 2134 FWL

43-047-51985	NBU 1022-12C4CS	Sec 12 T10S R22E 0855 FNL 2031 FWL
	BHL	Sec 12 T10S R22E 1076 FNL 2135 FWL

43-047-51987	NBU 1022-12D1CS	Sec 12 T10S R22E 0818 FNL 2016 FWL
	BHL	Sec 12 T10S R22E 0579 FNL 0819 FWL

43-047-51989	NBU 1022-12D1BS	Sec 12 T10S R22E 0809 FNL 2013 FWL
	BHL	Sec 12 T10S R22E 0260 FNL 0823 FWL

43-047-51990	NBU 1022-12D4BS	Sec 12 T10S R22E 0837 FNL 2024 FWL
	BHL	Sec 12 T10S R22E 0910 FNL 0819 FWL

43-047-51992	NBU 1022-12D4CS	Sec 12 T10S R22E 0846 FNL 2027 FWL
	BHL	Sec 12 T10S R22E 1241 FNL 0820 FWL

**NBU 1022-12FPAD**

43-047-51988	NBU 1022-12E1BS	Sec 12 T10S R22E 1818 FNL 2146 FWL
	BHL	Sec 12 T10S R22E 1572 FNL 0820 FWL

43-047-51993	NBU 1022-12E1CS	Sec 12 T10S R22E 1824 FNL 2154 FWL
	BHL	Sec 12 T10S R22E 1903 FNL 0821 FWL

43-047-51994	NBU 1022-12E4BS	Sec 12 T10S R22E 1835 FNL 2170 FWL
	BHL	Sec 12 T10S R22E 2234 FNL 0821 FWL

43-047-51995	NBU 1022-12F4BS	Sec 12 T10S R22E 1847 FNL 2187 FWL
	BHL	Sec 12 T10S R22E 2070 FNL 2140 FWL

43-047-51996	NBU 1022-12F1BS	Sec 12 T10S R22E 1841 FNL 2179 FWL
	BHL	Sec 12 T10S R22E 1407 FNL 2137 FWL

43-047-51997	NBU 1022-12F1CS	Sec 12 T10S R22E 1830 FNL 2162 FWL
	BHL	Sec 12 T10S R22E 1739 FNL 2138 FWL

**Michael L. Coulthard**

Digitally signed by Michael L. Coulthard  
 DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals,  
 email=Michael\_Coulthard@blm.gov, c=US  
 Date: 2011.09.19 14:47:24 -0600

bcc: File - Natural Buttes Unit

**Division of Oil Gas and Mining**

Central Files

Agr. Sec. Chron

Fluid Chron

MCoulthard:mc:9-19-11

**RECEIVED: September 20, 2011**

**From:** Diana Mason  
**To:**  
**Subject:** Fwd: Kerr McGee APD approvals

The following APDs have been approved by SITLA including arch and paleo clearance.

NBU 1022-12A1BS ( 4304751951)  
NBU 1022-12A1CS ( 4304751952)  
NBU 1022-12A4CS ( 4304751986)  
)NBU 1022-12A4BS ( 4304751991)  
NBU 1022-12J1CS ( 4304751955)  
NBU 1022-12J1BS ( 4304751957)  
NBU 1022-12I4BS ( 4304751958)  
NBU 1022-12I1BS ( 4304751976)  
NBU 1022-12I1CS ( 4304751978)  
NBU 1022-12B1BS ( 4304751944)  
)NBU 1022-12C1BS ( 4304751979)  
NBU 1022-12B1CS ( 4304751980)  
)NBU 1022-12C1CS ( 4304751981)  
NBU 1022-12B4BS ( 4304751982)  
NBU 1022-12B4CS ( 4304751983)  
)NBU 1022-12H4BS ( 4304751941)  
NBU 1022-12H1CS ( 4304751942)  
NBU 1022-12H1BS ( 4304751973)  
NBU 1022-12H4CS ( 4304751975)  
NBU 1022-12F4CS ( 4304751964)  
NBU 1022-12K1BS ( 4304751965)  
NBU 1022-12K1CS ( 4304751966)  
NBU 1022-12E4CS ( 4304751967)  
NBU 1022-12K4BS ( 4304751970)  
NBU 1022-12K4CS ( 4304751971)  
NBU 1022-12O1BS ( 4304751949)  
NBU 1022-12O1CS ( 4304751950)  
NBU 1022-12O4BS ( 4304751953)  
NBU 1022-12O4CS ( 4304751954)  
NBU 1022-12P4CS ( 4304751947)  
NBU 1022-12I4CS ( 4304751962)  
NBU 1022-12P1BS ( 4304751968)  
NBU 1022-12P4BS ( 4304751969)  
NBU 1022-12G1CS ( 4304751963)  
NBU 1022-12G4BS ( 4304751972)  
NBU 1022-12G1BS ( 4304751974)  
NBU 1022-12G4CS ( 4304751977)  
NBU 1022-12N4BS ( 4304751943)  
NBU 1022-12N4CS ( 4304751945)  
NBU 1022-12J4CS ( 4304751956)  
NBU 1022-12N1BS ( 4304751959)  
NBU 1022-12J4BS ( 4304751960)  
NBU 1022-12N1CS ( 4304751961)

-Jim Davis

**RECEIVED: November 08, 2011**

Jim Davis  
Utah Trust Lands Administration  
[jimdavis1@utah.gov](mailto:jimdavis1@utah.gov)  
Phone: (801) 538-5156



Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-1211CS			
String	Surf	Prod		
Casing Size(in)	8.625	4.500		
Setting Depth (TVD)	2160	8455		
Previous Shoe Setting Depth (TVD)	40	2160		
Max Mud Weight (ppg)	8.3	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5377	12.2		

Calculations	Surf String	8.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	932		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	673	NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	457	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	466	NO	Reasonable for area
Required Casing/BOPE Test Pressure=		2160	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient	

Calculations	Prod String	4.500	"	
Max BHP (psi)	.052*Setting Depth*MW=	5496		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4481	YES	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3636	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4111	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		2160	psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	

API Well Number: 43047519780000

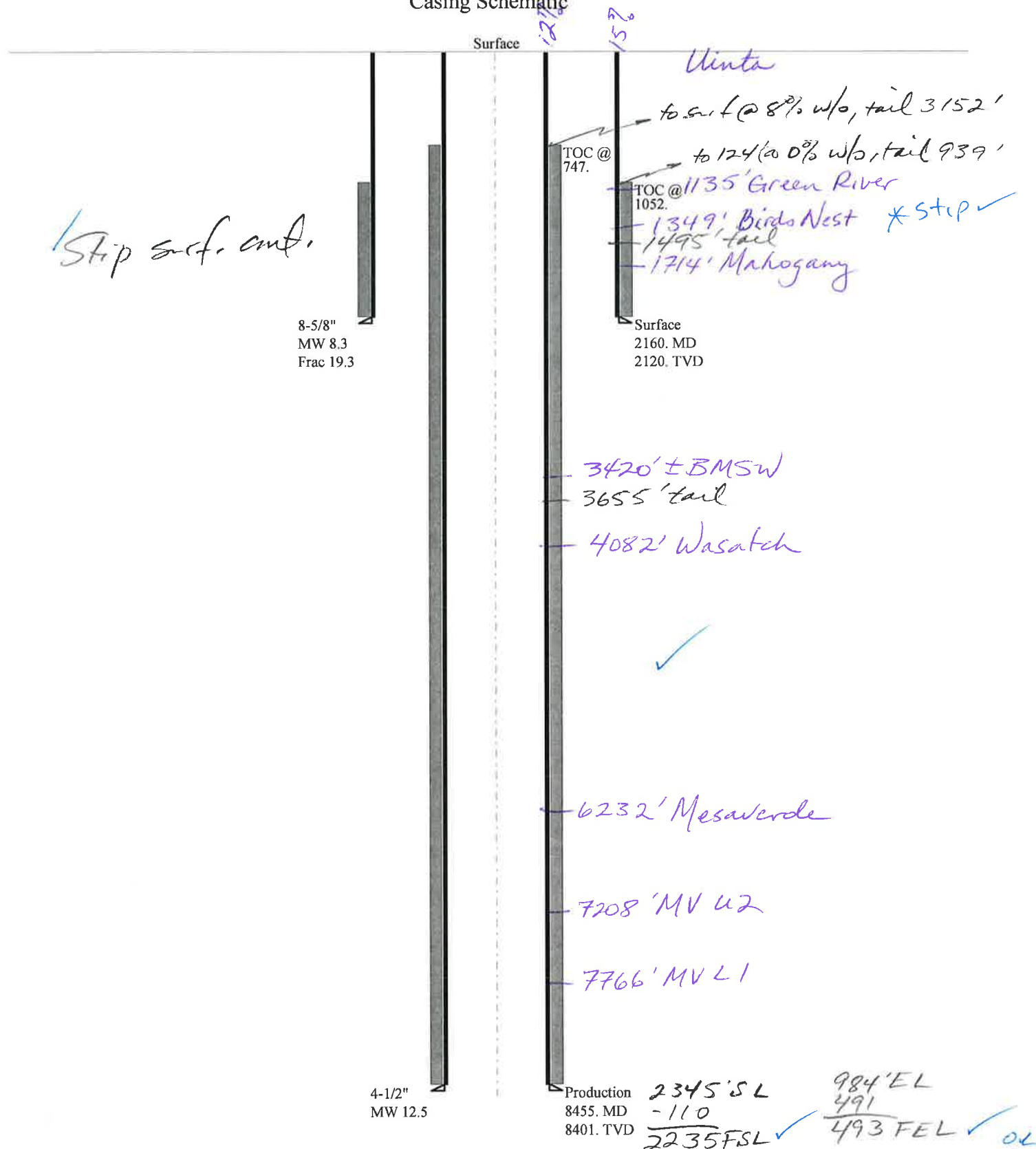
\*Max Pressure Allowed @ Previous Casing Shoe=

psi \*Assumes 1psi/ft frac gradient

**RECEIVED:** December 12, 2011

# 43047519780000 NBU 1022-12I1CS

## Casing Schematic



Well name:	<b>43047519780000 NBU 1022-1211CS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Surface	Project ID:	43-047-51978
Location:	UINTAH	COUNTY	

**Design parameters:****Collapse**

Mud weight: 8.330 ppg  
Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 104 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 1,052 ft

**Burst**

Max anticipated surface pressure: 1,901 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,155 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.70 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on air weight.  
Neutral point: 1,892 ft

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 361 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 13.75 °

**Re subsequent strings:**

Next setting depth: 8,455 ft  
Next mud weight: 12.500 ppg  
Next setting BHP: 5,490 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,160 ft  
Injection pressure: 2,160 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2160	8.625	28.00	I-55	LT&C	2120	2160	7.892	85536
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	917	1880	2.049	2155	3390	1.57	59.4	348	5.86 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: December 1, 2011  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2120 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:	<b>43047519780000 NBU 1022-1211CS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Production	Project ID:	43-047-51978
Location:	UINTAH COUNTY		

**Design parameters:****Collapse**

Mud weight: 12.500 ppg  
Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 192 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 747 ft

**Burst**

Max anticipated surface pressure: 3,607 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 5,455 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 503 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 0 °

Tension is based on air weight.  
Neutral point: 6,885 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8455	4.5	11.60	I-80	LT&C	8401	8455	3.875	111606

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5455	6360	1.166	5455	7780	1.43	97.5	212	2.18 J

Prepared Helen Sadik-Macdonald  
by: Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: December 1, 2011  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 8401 ft, a mud weight of 12.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*

# **ON-SITE PREDRILL EVALUATION**

## **Utah Division of Oil, Gas and Mining**

<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
<b>Well Name</b>	NBU 1022-12I1CS				
<b>API Number</b>	43047519780000	<b>APD No</b>	4607	<b>Field/Unit</b>	NATURAL BUTTES
<b>Location: 1/4,1/4</b>	NESE	<b>Sec</b>	12	<b>Tw</b>	10.0S
		<b>Rng</b>	22.0E	2345	FSL 984 FEL
<b>GPS Coord (UTM)</b>	638218	4424655	<b>Surface Owner</b>		

### **Participants**

Andy Lytle, Sheila Wopsock, Charles Chase, Grizz Oleen, Jaime Scharnowski, Doyle Holmes, (Kerr McGee). John Slaugh, Mitch Batty, (Timberline). Jim Davis (SITLA). Ben Williams (DWR). David Hackford, (DOGM).

### **Regional/Local Setting & Topography**

The general area is in the southeast portion of the Natural Buttes Unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is 3900'. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 47.9 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads. Four wells, in addition to this one will be directionally drilled from this pad. (For a total of five new wells). There is one existing well on this pad. (The NBU 1022-12I). At this time, the decision rather to PA or TA this well has not been made. This proposed location takes in an existing location, and very little new construction will be necessary except for digging the reserve pit. The existing access road will be adequate. The location runs in an east-west direction along the top of a flat topped ridge. This ridge breaks off sharply into rugged secondary canyons on the north, south and west sides. New construction will consist of approx. 50 feet on all sides of the existing pad, and an additional 50 feet on the north side for reserve pit and excess cut stockpile. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and should be a suitable location for six wells, and is on the best site available in the immediate area.

### **Surface Use Plan**

#### **Current Surface Use**

Grazing  
Wildlife Habitat  
Existing Well Pad

<b>New Road Miles</b>	<b>Well Pad</b>	<b>Src Const Material</b>	<b>Surface Formation</b>
0	<b>Width 332 Length 415</b>	Onsite	UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?** Y

### **Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass, annuals and curly Vegetation is a salt desert shrub type. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, coyote, raptors, small mammals and birds.

### Soil Type and Characteristics

Rocky sandy clay loam.

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** Y

West side of reserve pit will be 3.4 feet of fill. This fill shall be compacted during location construction.

**Drainage Diversion Required?** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

**Paleo Survey Run?** Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** N

### Reserve Pit

#### Site-Specific Factors

#### Site Ranking

<b>Distance to Groundwater (feet)</b>	100 to 200	5
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0
<b>Distance to Other Wells (feet)</b>		20
<b>Native Soil Type</b>	High permeability	20
<b>Fluid Type</b>	Fresh Water	5
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>		0
<b>Affected Populations</b>		
<b>Presence Nearby Utility Conduits</b>	Not Present	0
<b>Final Score</b>	50	1 Sensitivity Level

#### Characteristics / Requirements

The reserve pit is planned in an area of cut (except for the northwest corner of pit which will be in 3.4 feet of fill) on the north side of the location. Dimensions are 120' x 220' x 12' deep with 2' of freeboard. Kerr McGee agreed to line this pit with a 16 mil synthetic liner and a layer of felt sub-liner.

**Closed Loop Mud Required?** N **Liner Required?** Y **Liner Thickness** 16 **Pit Underlayment Required?** Y

### Other Observations / Comments

David Hackford  
Evaluator

10/12/2011  
Date / Time



# Application for Permit to Drill

## Statement of Basis

12/19/2011

Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
4607	43047519780000	SITLA	GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 1022-1211CS		<b>Unit</b>	NATURAL BUTTES	
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	NESE 12 10S 22E S 2345 FSL 984 FEL GPS Coord (UTM) 638153E 4424861N				

### Geologic Statement of Basis

Kerr McGee proposes to set 2,160' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,420'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 12. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill  
APD Evaluator

11/2/2011  
Date / Time

### Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is 3900'. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 48 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads. The existing access road will be adequate.

Five wells will be directionally drilled from this location. They are the NBU 1022-1211BS, NBU 1022-1211CS, NBU 1022-1214BS, NBU 1022-1211BS and the NBU 1022-1211CS. The existing location has one well. This well is the NBU 1022-121, and at this time the decision rather to PA or TA this well has not been made. The location is on a flat topped ridge that runs in a northeast-southwest direction. This ridge breaks off sharply into rugged secondary canyons on the north, south and west sides. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and sufficient for six wells, and is the best site for a location in the immediate area.

New construction will consist of approx. 50 feet on all sides of the existing pad, and an additional 50 feet on the north side for reserve pit and excess cut stockpile.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Ben Williams with DWR were invited by email to the pre-site evaluation. Both were present. Kerr McGee personnel were told to consult with SITLA for reclamation standards including seeding mixes to be used.

David Hackford  
Onsite Evaluator

10/12/2011  
Date / Time

### Conditions of Approval / Application for Permit to Drill

Category	Condition
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**RECEIVED: December 19, 2011**

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## **Application for Permit to Drill Statement of Basis**

12/19/2011

**Utah Division of Oil, Gas and Mining**

Page 2

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	Excess material must be stockpiled just beyond the northwest corner of the reserve pit which is in 3.4' of fill.
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the north side of the location.
Surface	The well site shall be bermed to prevent fluids from leaving the pad.

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 9/13/2011**API NO. ASSIGNED:** 43047519780000**WELL NAME:** NBU 1022-12I1CS**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)**PHONE NUMBER:** 720 929-6086**CONTACT:** Gina Becker**PROPOSED LOCATION:** NESE 12 100S 220E**Permit Tech Review:** ☒**SURFACE:** 2345 FSL 0984 FEL**Engineering Review:** ☒**BOTTOM:** 2237 FSL 0492 FEL**Geology Review:** ☒**COUNTY:** UINTAH**LATITUDE:** 39.96262**LONGITUDE:** -109.38244**UTM SURF EASTINGS:** 638153.00**NORTHINGS:** 4424861.00**FIELD NAME:** NATURAL BUTTES**LEASE TYPE:** 3 - State**LEASE NUMBER:** UT ST UO 01997-A ST**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE**SURFACE OWNER:** 3 - State**COALBED METHANE:** NO**RECEIVED AND/OR REVIEWED:**☒ **PLAT**☒ **Bond:** STATE/FEE - 22013542☐ **Potash**☒ **Oil Shale 190-5**☐ **Oil Shale 190-3**☐ **Oil Shale 190-13**☒ **Water Permit:** 43-8496☐ **RDCC Review:**☐ **Fee Surface Agreement**☒ **Intent to Commingle****Commingle Approved****LOCATION AND SITING:**☐ **R649-2-3.****Unit:** NATURAL BUTTES☐ **R649-3-2. General**☐ **R649-3-3. Exception**☒ **Drilling Unit****Board Cause No:** Cause 173-14**Effective Date:** 12/2/1999**Siting:** Suspends General Siting☒ **R649-3-11. Directional Drill****Comments:** Presite Completed

**Stipulations:** 3 - Commingle - ddoucet  
5 - Statement of Basis - bhill  
15 - Directional - dmason  
17 - Oil Shale 190-5(b) - dmason  
25 - Surface Casing - hmadonald

**RECEIVED: December 19, 2011**



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 1022-12I1CS

**API Well Number:** 43047519780000

**Lease Number:** UT ST UO 01997-A ST

**Surface Owner:** STATE

**Approval Date:** 12/19/2011

**Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**Commingling:**

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

**Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels  
OR  
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

**Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office  
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office  
801-231-8956 - after office hours

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**



For John Rogers  
Associate Director, Oil & Gas

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:

UT ST UO 01197-A ST

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

UTU63047A

1. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER \_\_\_\_\_

8. WELL NAME and NUMBER:

Multiple Well Locations

9. API NUMBER:

2. NAME OF OPERATOR:

Kerr-McGee Oil & Gas Onshore, L.P.

3. ADDRESS OF OPERATOR:

P.O. Box 173779

Denver

CO

80217

PHONE NUMBER:

(720) 929-6086

10. FIELD AND POOL, OR WILDCAT

Natural Buttes

4. LOCATION OF WELL

FOOTAGES AT SURFACE: Various Locations in T10S-R22E, Section 12

COUNTY: Uintah

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:

12 10S 22E 6

STATE:

UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>4/23/2012</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Lease Number</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<u>Correction</u>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee is requesting approval to correct the lease number from UT ST UO 01997-A ST to UT ST UO 01197-A ST for various well locations. Please see attached well list.

Thank you!

NAME (PLEASE PRINT) Gina T Becker

TITLE Senior Regulatory Analyst

SIGNATURE Gina T Becker

DATE 4/23/2012

(This space for State use only)

RECEIVED

APR 24 2012

	API UWI NO	WELL NAME	SL STATE	SL SECTION	SL TOWNSHIP	SL RANGE	SL COUNTY NAME	GOV LEASE NO	FEDERAL LEASE NO
1	4304751951	NBU 1022-12A1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
2	4304751952	NBU 1022-12A1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
3	4304751991	NBU 1022-12A4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
4	4304751986	NBU 1022-12A4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
5	4304751944	NBU 1022-12B1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
6	4304751980	NBU 1022-12B1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
7	4304751982	NBU 1022-12B4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
8	4304751983	NBU 1022-12B4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
9	4304751979	NBU 1022-12C1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
10	4304751981	NBU 1022-12C1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
11	4304751984	NBU 1022-12C4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
12	4304751985	NBU 1022-12C4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
13	4304751989	NBU 1022-12D1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
14	4304751987	NBU 1022-12D1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
15	4304751990	NBU 1022-12D4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
16	4304751992	NBU 1022-12D4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
17	4304751988	NBU 1022-12E1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
18	4304751993	NBU 1022-12E1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
19	4304751994	NBU 1022-12E4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
20	4304751996	NBU 1022-12F1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
21	4304751997	NBU 1022-12F1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
22	4304751995	NBU 1022-12F4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
23	4304751967	NBU 1022-12E4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
24	4304751964	NBU 1022-12F4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
25	4304751965	NBU 1022-12K1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
26	4304751966	NBU 1022-12K1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
27	4304751970	NBU 1022-12K4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
28	4304751971	NBU 1022-12K4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
29	4304751974	NBU 1022-12G1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
30	4304751963	NBU 1022-12G1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
31	4304751972	NBU 1022-12G4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
32	4304751977	NBU 1022-12G4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
33	4304751973	NBU 1022-12H1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
34	4304751942	NBU 1022-12H1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
35	4304751941	NBU 1022-12H4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
36	4304751975	NBU 1022-12H4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
37	4304751976	NBU 1022-12I1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
38	4304751978	NBU 1022-12I1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
39	4304751958	NBU 1022-12I4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
40	4304751957	NBU 1022-12J1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
41	4304751955	NBU 1022-12J1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
42	4304751960	NBU 1022-12J4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
43	4304751956	NBU 1022-12J4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
44	4304751959	NBU 1022-12N1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
45	4304751961	NBU 1022-12N1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
46	4304751943	NBU 1022-12N4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
47	4304751945	NBU 1022-12N4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
48	4304751962	NBU 1022-12I4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
49	4304751968	NBU 1022-12P1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A



	API UWI NO	WELL NAME	SL STATE	SL SECTION	SL TOWNSHIP	SL RANGE	SL COUNTY NAME	GOV LEASE NO	FEDERAL LEASE NO
50	4304751969	NBU 1022-12P4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
51	4304751947	NBU 1022-12P4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
52	4304751949	NBU 1022-12O1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
53	4304751950	NBU 1022-12O1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
54	4304751953	NBU 1022-12O4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
55	4304751954	NBU 1022-12O4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-1211CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2345 FSL 0984 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519780000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 12/19/2012  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE   <input type="checkbox"/> CHANGE TO PREVIOUS PLANS   <input type="checkbox"/> CHANGE WELL STATUS   <input type="checkbox"/> DEEPEN   <input type="checkbox"/> OPERATOR CHANGE   <input type="checkbox"/> PRODUCTION START OR RESUME   <input type="checkbox"/> REPERFORATE CURRENT FORMATION   <input type="checkbox"/> TUBING REPAIR   <input type="checkbox"/> WATER SHUTOFF   <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING   <input type="checkbox"/> CHANGE TUBING   <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS   <input type="checkbox"/> FRACTURE TREAT   <input type="checkbox"/> PLUG AND ABANDON   <input type="checkbox"/> RECLAMATION OF WELL SITE   <input type="checkbox"/> SIDETRACK TO REPAIR WELL   <input type="checkbox"/> VENT OR FLARE   <input type="checkbox"/> SI TA STATUS EXTENSION   <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR   <input type="checkbox"/> CHANGE WELL NAME   <input type="checkbox"/> CONVERT WELL TYPE   <input type="checkbox"/> NEW CONSTRUCTION   <input type="checkbox"/> PLUG BACK   <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION   <input type="checkbox"/> TEMPORARY ABANDON   <input type="checkbox"/> WATER DISPOSAL   <input checked="" type="checkbox"/> <b>APD EXTENSION</b>           OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.		
<div style="text-align: right;"> <b>Approved by the Utah Division of Oil, Gas and Mining</b>   <b>Date:</b> December 12, 2012   <b>By:</b> </div>		
<b>NAME (PLEASE PRINT)</b> Luke Urban	<b>PHONE NUMBER</b> 720 929-6501	<b>TITLE</b> Regulatory Specialist
<b>SIGNATURE</b> N/A		<b>DATE</b> 12/11/2012



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047519780000**

API: 43047519780000

Well Name: NBU 1022-12I1CS

Location: 2345 FSL 0984 FEL QTR NESE SEC 12 TWNP 100S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 12/19/2011

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☒ Yes ☐ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Signature: Luke Urban

Date: 12/11/2012

Title: Regulatory Specialist Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-1211CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2345 FSL 0984 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519780000
<b>PHONE NUMBER:</b> 720 929-6511		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 2/19/2013	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CEMENT WITH 28 SACKS READY MIX. SPUD WELL LOCATION ON February 16, 2013 AT 16:00 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> February 20, 2013		
<b>NAME (PLEASE PRINT)</b> Lindsey Frazier	<b>PHONE NUMBER</b> 720 929-6857	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 2/19/2013	

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: P.O. Box 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6857

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751957	NBU 1022-12J1BS		NESE	12	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	2/16/2013			2/28/2013	
<b>Comments:</b> MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON February 16, 2013 AT 12:00 HRS.							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751978	NBU 1022-12I1CS		NESE	12	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	2/16/2013			2/28/2013	
<b>Comments:</b> MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON February 16, 2013 AT 16:00 HRS.							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<b>Comments:</b>							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Lindsey Frazier

Name (Please Print)

Signature

REGULATORY ANALYST II

Title

2/19/2013

Date

**RECEIVED**

**FEB 19 2013**

Div. of Oil, Gas & Mining

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
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<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-1211CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2345 FSL 0984 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519780000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 3/14/2013  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE   <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS   <input type="checkbox"/> CHANGE WELL STATUS   <input type="checkbox"/> DEEPEN   <input type="checkbox"/> OPERATOR CHANGE   <input type="checkbox"/> PRODUCTION START OR RESUME   <input type="checkbox"/> REPERFORATE CURRENT FORMATION   <input type="checkbox"/> TUBING REPAIR   <input type="checkbox"/> WATER SHUTOFF   <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING   <input type="checkbox"/> CHANGE TUBING   <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS   <input type="checkbox"/> FRACTURE TREAT   <input type="checkbox"/> PLUG AND ABANDON   <input type="checkbox"/> RECLAMATION OF WELL SITE   <input type="checkbox"/> SIDETRACK TO REPAIR WELL   <input type="checkbox"/> VENT OR FLARE   <input type="checkbox"/> SI TA STATUS EXTENSION   <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR   <input type="checkbox"/> CHANGE WELL NAME   <input type="checkbox"/> CONVERT WELL TYPE   <input type="checkbox"/> NEW CONSTRUCTION   <input type="checkbox"/> PLUG BACK   <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION   <input type="checkbox"/> TEMPORARY ABANDON   <input type="checkbox"/> WATER DISPOSAL   <input type="checkbox"/> APD EXTENSION           OTHER: <input style="width: 100px;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  <div style="display: flex;"> <div style="flex: 1;"> <p>The operator requests approval for changes in the drilling plan. Specifically, the operator requests approval for a FIT wavier, closed loop drilling option, and a production casing change. The production casing change includes a switch from 4.5 inch I-80 11.6 BTC/LTC casing to 4.5 inch I-80 11.6 LB Ultra DQX/LTC casing. All other aspects of the previously approved drilling plan will not change. Please see closed loop attachment.</p> </div> <div style="flex: 0.5; text-align: center; vertical-align: top;"> <p style="color: red; font-weight: bold;">Approved by the Utah Division of Oil, Gas and Mining</p> <p style="color: red; font-weight: bold;">Date: March 14, 2013</p> <p style="color: red; font-weight: bold;">By: <u><i>Derek Duff</i></u></p> </div> </div>		
<b>NAME (PLEASE PRINT)</b> Lindsey Frazier		<b>PHONE NUMBER</b> 720 929-6857
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst II
<b>DATE</b> 3/14/2013		

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-1211CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2345 FSL 0984 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519780000
<b>PHONE NUMBER:</b> 720 929-6511		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 6/4/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Drilled to 2,345 ft. in May 2013.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> June 10, 2013		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/4/2013	

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54  
Submitted By KENNY MORRIS Phone Number 435-790-2921  
Well Name/Number NBU 1022-12I1CS  
Qtr/Qtr NE/NE Section 12 Township 10S Range 22E  
Lease Serial Number UT ST UO 01997-A ST  
API Number 4304751978

Casing – Time casing run starts, not cementing times.

- ☐ Production Casing  
☐ Other

Date/Time \_\_\_\_\_ AM ☐ PM ☐

BOPE

- ☒ Initial BOPE test at surface casing point  
☐ Other

Date/Time 6/10/2013 06:00 AM ☐ PM ☐

Rig Move

Location To: NBU 1022-12I PAD

Date/Time \_\_\_\_ \_ AM ☐ PM ☐

RECEIVED

JUN 09 2013

DIV. OF OIL, GAS & MINING

Remarks 4TH WELL OF 5 ON THE NBU 1022-12I PAD

\_\_\_\_\_

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-1211CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2345 FSL 0984 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519780000
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>TYPE OF SUBMISSION</b>  <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/1/2013	<b>TYPE OF ACTION</b>  <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE   <input type="checkbox"/> CHANGE TO PREVIOUS PLANS   <input type="checkbox"/> CHANGE WELL STATUS   <input type="checkbox"/> DEEPEN   <input type="checkbox"/> OPERATOR CHANGE   <input type="checkbox"/> PRODUCTION START OR RESUME   <input type="checkbox"/> REPERFORATE CURRENT FORMATION   <input type="checkbox"/> TUBING REPAIR   <input type="checkbox"/> WATER SHUTOFF   <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING   <input type="checkbox"/> CHANGE TUBING   <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS   <input type="checkbox"/> FRACTURE TREAT   <input type="checkbox"/> PLUG AND ABANDON   <input type="checkbox"/> RECLAMATION OF WELL SITE   <input type="checkbox"/> SIDETRACK TO REPAIR WELL   <input type="checkbox"/> VENT OR FLARE   <input type="checkbox"/> SI TA STATUS EXTENSION   <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR   <input type="checkbox"/> CHANGE WELL NAME   <input type="checkbox"/> CONVERT WELL TYPE   <input type="checkbox"/> NEW CONSTRUCTION   <input type="checkbox"/> PLUG BACK   <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION   <input type="checkbox"/> TEMPORARY ABANDON   <input type="checkbox"/> WATER DISPOSAL   <input type="checkbox"/> APD EXTENSION           OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> Drilled to 8,465 ft. in June 2013.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> July 01, 2013		
<b>NAME (PLEASE PRINT)</b> Teena Paulo		<b>PHONE NUMBER</b> 720 929-6236
<b>SIGNATURE</b> N/A		<b>TITLE</b> Staff Regulatory Specialist
<b>DATE</b> 7/1/2013		

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-1211CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2345 FSL 0984 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519780000
<b>PHONE NUMBER:</b> 720 929-6511		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/5/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Started completing the well. Well TD at 8,465 ft.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> August 08, 2013		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/5/2013	



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-1211CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2345 FSL 0984 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519780000
<b>PHONE NUMBER:</b> 720 929-6514		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/13/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 8/13/2013. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> August 21, 2013		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/14/2013	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-1211CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2345 FSL 0984 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519780000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 11/26/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. FINISHED DRILLING TO 8465 ON 6/12/2013. CEMENTED PRODUCTION CASING. RELEASED PIONEER 54 RIG ON 6/13/2013. DETAILS OF CASING AND CEMENT WAS INCLUDED WITH THE WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> November 26, 2013		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 11/26/2013	





## 31. INITIAL PRODUCTION

## INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 8/13/2013		TEST DATE: 8/16/2013		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 13	GAS - MCF: 2526	WATER - BBL: 0	PROD. METHOD: Flowing
CHOKE SIZE: 20/64	TBG. PRESS. 1413	CSG. PRESS. 1908	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL: 13	GAS - MCF: 2526	WATER - BBL: 0	INTERVAL STATUS Producing

## INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS

## INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS

## INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS

## 32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

**SOLD**

## 33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				<b>GREEN RIVER</b>	<b>1201</b>
				<b>BIRD'S NEST</b>	<b>1362</b>
				<b>MAHOGANY</b>	<b>1839</b>
				<b>WASATCH</b>	<b>4135</b>
				<b>MESAVERDE</b>	<b>6205</b>

## 35. ADDITIONAL REMARKS (Include plugging procedures)

The first 210 ft. of the surface hole was drilled with a 12 ¼ in. bit. The remainder of surface hole was drilled with an 11in. bit. DQX csg was run from surface to 5026 ft.; LTC csg was run from 5026 ft. to 8451 ft. Attached is the chronological well history, perforation report & final survey.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) **Teena Paulo**TITLE **Staff Regulatory Specialist**

SIGNATURE

DATE

This report must be submitted within 30 days of

- completing or plugging a new well
- reentering a previously plugged and abandoned well
- drilling horizontal laterals from an existing well bore
- significantly deepening an existing well bore below the previous bottom-hole depth
- recompleting to a different producing formation
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940



US ROCKIES REGION  
Operation Summary Report

Well: NBU 1022-1211CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/21/2013

End Date: 6/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/1 2/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/10/2013	9:30 - 12:30	3.00	MIRU	01	B	P	59	SKID RIG 20' TO NBU 1022-1211CS, RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY
	12:30 - 13:00	0.50	MIRU	01	C	P	59	PRE SPUD JOB SAFETY MEETING REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE, PRIOR TO SPUD. FINISH PICKING UP BHA. PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN #10 ) .17 REV/GAL SN (1044684-8). PICK UP 12.25 REED DRILL BIT RUN 10 SN (A172023)
	13:00 - 14:30	1.50	DRLSUR	02	B	P	59	SPUD @ 05/10/2013 13:00. DRILL 12.25" HOLE 44'-210' (166', 110'/PER HOUR) 12.25" BIT ON 8th RUN. WEIGHT ON BIT 5-15 K. STROKES PER MINUTE 120 GALLONS PER MINUTE 491. PRESSURE ON/OFF (BOTTOM) 800/600. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROTATE 20/20/20 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.3# WATER. RUNNING VOLUME THROUGH 1 CENTRAFUGE DEWATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. DRILL DOWN TO 210' WITH 6" DRILL COLLARS.
	14:30 - 16:00	1.50	DRLSUR	06	A	P	225	PRE JOB SAFETY MEETING, CIRC 15 MINUTES AND, TRIP OUT TO CHANGE ASSEMBLY. LAY DOWN 6" DRILL COLLARS, BREAK 12 1/4" BIT. MAKE UP REED 11" BIT ( 4TH RUN) (SN A172025) PICK UP 8" DIRECTIONAL ASSEMBLY. INSTALL EM TOOL, TRIP IN HOLE.

## Operation Summary Report

Well: NBU 1022-121CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/21/2013

End Date: 6/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/12/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:00 - 0:00	8.00	DRLSUR	02	B	P	225	DRILL 11". SURFACE HOLE 210'-1140', (930', 116'/PER HOUR). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE 120 GALLONS PER MINUTE 491. PRESSURE ON/OFF(BOTTOM) 900/700. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 50/40/45 K. DRAG 5 K. SLIDING 15' PER 90'OF ROTATION GETTING 1.5 DEGREE BUILD RATES CURRENTLY 7' NORTH 2' RIGHT OF THE LINE CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRAFUGE DEWATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
5/11/2013	0:00 - 6:00	6.00					1155	DRILL 11". SURFACE HOLE 1140'-1800', (660', 110'/PER HOUR). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE 120 GALLONS PER MINUTE 491. PRESSURE ON/OFF(BOTTOM) 1400/1200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 70/50/60 K. DRAG 10 K. SLIDING 15' PER 90'OF ROTATION GETTING 1.5 DEGREE BUILD RATES CURRENTLY 4.3' NORTH 5.8' RIGHT OF THE LINE CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRAFUGE DEWATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. PUT AIR ON THE HOLE @ 1800 CFM, @ 1400'.
	6:00 - 8:30	2.50	DRLSUR	02	B	P	1815	DRILL 11". SURFACE HOLE 1800'-2070', (270', 108'/PER HOUR). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE 120 GALLONS PER MINUTE 491. PRESSURE ON/OFF(BOTTOM) 1450/1200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 75/55/65 K. DRAG 10 K. SLIDING 15' PER 90'OF ROTATION GETTING 1.5 DEGREE BUILD RATES CURRENTLY 4.3' NORTH 5.8' RIGHT OF THE LINE CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRAFUGE DEWATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. PUT AIR ON THE HOLE @ 1800 CFM, @ 1400'.
	8:30 - 10:30	2.00	DRLSUR	08	A	Z	2085	***FAILURE: RIG EQUIPMENT - (RADIATOR) BLEW A RADIATOR HOSE, HAD TO WAIT FOR A NEW ONE TO COME FROM TOWN.

## Operation Summary Report

Well: NBU 1022-121CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/21/2013

End Date: 6/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/1 2/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	10:30 - 12:30	2.00	DRLSUR				2085	DRILL 11". SURFACE HOLE 2070'-2330', (260', 108'/PER HOUR). WEIGHT ON BIT 18-25 K. STROKES PER MINUTE 120 GALLONS PER MINUTE 491. PRESSURE ON/OFF(BOTTOM) 1450/1200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 80/60/70 K. DRAG 10 K. SLIDING 15' PER 90'OF ROTATION GETTING 1.5 DEGREE BUILD RATES CURRENTLY .28' NORTH 3.07' RIGHT OF THE LINE CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 1 CENTRAFUGE DEWATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. PUTAIR ON THE HOLE @ 1800 CFM, @ 1400'.
	12:30 - 14:30	2.00	DRLSUR	05	A	P		CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 4-400 BBL UPRIGHT'S FULL AND 2-400 BBL UPRIGHTS EMPTY, MUD TANKS FULL.
	14:30 - 18:00	3.50	CSGSUR	06	D	P		TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, DIRECTIONAL TOOLS, MOTOR AND, BIT. CLEAR TOOL AREA.
	18:00 - 18:30	0.50	CSGSUR	06	D	P		PRE JOB SAFETY MEETING, MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN SURFACE CASING. CLEAR UNRELATED TOOLS.
	18:30 - 20:00	1.50	CSGSUR	12	C	P		RUN 52 JOINTS OF 8-5/8". 28# J-55 LTC CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN A TOTAL OF 52 JOINTS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2296.00' KB. SET TOP OF BAFFLE PLATE @ 2249.77' KB.
	20:00 - 21:30	1.50	CSGSUR	12	E	P		PRE JOB SAFETY MEETING, RELEASE RIG @ 05/11/2013 21:30 RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING. PRESSURE TEST LINES TO 2000 PSI. PUMP 145 BBLS OF WATER AHEAD. MIX AND PUMP 20 BBLS OF 8.5# GEL WATER AHEAD. MIX AND PUMP (300 sx) 61.4 BBLS OF 15.8.8# 1.15 YIELD. DROP PLUG ON FLY, DISPLACE WITH 140 BBLS OF H2O, NO RETURNS THROUGH OUT JOB, FINAL LIFT OF 300 PSI AT 3 BBL/MINUTE. BUMP THE PLUG WITH 800 PSI, HELD 800 PSI FOR 5 MINUTES, TESTED FLOAT AND FLOAT DID NOT HOLD. SHUT DOWN AND WASH UP.

## Operation Summary Report

Well: NBU 1022-121CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/21/2013

End Date: 6/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/1 2/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	21:30 - 21:30	0.00	CSGSUR	12	E	P		PUMP CEMENT DOWN ONE INCH PIPE WITH 150 sx (30.7 bbls.) SAME CEMENT NO CEMENT RETURNS TO SURFACE. SHUT DOWN AND WASH UP. WAIT 1.5 HOURS ON CEMENT, CEMENT DOWN BACKSIDE W/ 150 sx (30.7 bbls.) SAME CEMENT, NO RETURNS TO SURFACE. WAIT 1.5 HOURS ON CEMENT, CEMENT DOWN BACKSIDE W/ 150 sx (30.7 bbls.) SAME CEMENT, NO RETURNS TO SURFACE. WAIT 1.5 HOURS ON CEMENT, CEMENT DOWN BACKSIDE W/ 150 sx (30.7 bbls.) SAME CEMENT, 3 BBLs CEMENT RETURNS TO SURFACE. RIG DOWN CEMENTERS. (CEMENT JOB FINISHED @ 05/12/2012 08:00)
6/10/2013	0:00 - 1:00	1.00	MIRU3	01	C	P	2345	SKID RIG 10' TO THE NBU 1022-121CS
	1:00 - 3:00	2.00	PRPSPD	14	A	P	2345	NIPPLE UP AND FUNCTION TEST BOPE, CHANGE ROTATING HEAD ASSEMBLY
	3:00 - 6:30	3.50	PRPSPD	15	A	P	2345	HELD SAFETY MEETING WITH RIG CREW & B & C TESTER, R/U & TEST BOPE, TEST PIPE RAMS, BLIND RAMS, INNER-OUTER BOP VALVES, CHOKE VALVES, FLOOR VALVES FOR 5 MIN 250 LOW, 10 MIN 5000 HIGH, ANN 5 MIN 250- 10 MIN 2500, SURFACE CASING 1500 FOR 30 MIN'S
	6:30 - 7:00	0.50	PRPSPD	14	B	P	2345	INSTALL WEAR BUSHING, TIGHTEN TURN BUCKLES
	7:00 - 7:30	0.50	PRPSPD	23		P	2345	PRE SPUD SAFETY INSPECTION, SET CROWN O MATIC
	7:30 - 9:00	1.50	PRPSPD	06	A	P	2345	P/U BHA & SCRIBE, TRIP IN HOLE TO TOP OF CEMENT @ 2258'
	9:00 - 10:00	1.00	DRLPRC	02	F	P	2345	DRILL CEMENT & SHOE TRACK BAFFLE @2264, SHOE @2309 & NEW 7.875" HOLE TO 2345
	10:00 - 16:00	6.00	DRLPRC	02	B	P	2345	CLOSED LOOP SYSTEM DRILL F/2345 TO 3577=1232 @ FT/HR WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.7 PPG VIS 30 TRQ ON/OFF = 9/6 K PSI ON /OFF 2000/1650 , DIFF 300-500 PU/SO/RT = 120-80-114 K SLIDE = 44 ROT =1188 NOV / 2-DEWATERING 33'N 12' W OF TARGET CENTER 0 0 DRILL FLARE, 0 CONN FLARE
	16:00 - 16:30	0.50	DRLPRV	07	A	P	3577	RIG SERVICE



## Operation Summary Report

Well: NBU 1022-121CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/21/2013

End Date: 6/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/1 2/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:30 - 0:00	7.50	DRLPRV	02	B	P	3577	CLOSED LOOP SYSTEM DRILL F/3577 TO 5185=1608@214 FT/HR WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.7 PPG VIS 30 TRQ ON/OFF = 10/7 K PSI ON /OFF 2000/1650 , DIFF 300-500 PU/SO/RT =135-105-90 K SLIDE =64 ROT =1544 NOV / 2-DEWATERING 1' N 7' W OF TARGET CENTER 0 0 DRILL FLARE, 0 CONN FLARE
6/11/2013	0:00 - 8:00	8.00	DRLPRV	02	B	P	5185	CLOSED LOOP SYSTEM DRILL F/5185 TO 6220=1035 @129 FT/HR WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.7 PPG VIS 30 TRQ ON/OFF = 10/7 K PSI ON /OFF 2000/1650 , DIFF 300-500 PU/SO/RT =180-145-128 K SLIDE =30 ROT =1005 NOV / 2-DEWATERING 3 N 5 W OF TARGET CENTER 0 0 DRILL FLARE, 0 CONN FLARE
	8:00 - 17:30	9.50	DRLPRV	02	B	P	6220	CLOSED LOOP SYSTEM DRILL F/6220 TO 7344=1124 @118 FT/HR WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.7 PPG VIS 30 TRQ ON/OFF = 10/7 K PSI ON /OFF 2000/1650 , DIFF 300-500 PU/SO/RT =195-145-165 K SLIDE =30 ROT =1095 NOV / 2-DEWATERING 10 N 8 EAST OF TARGET CENTER 0 3 DRILL FLARE, 5 CONN FLARE
	17:30 - 18:00	0.50	DRLPRV	07	A	P	7344	RIG SERVICE
	18:00 - 22:30	4.50	DRLPRV	02	B	P	7344	CLOSED LOOP SYSTEM DRILL F/7344 TO 7819=475@105 FT/HR WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 200 GPM 586 MW 8.7 PPG VIS 30 TRQ ON/OFF = 12/8 K PSI ON /OFF 2000/1650 , DIFF 300-500 PU/SO/RT =205-- K SLIDE =0 ROT =475 NOV / 2-DEWATERING 6 N 6 EAST OF TARGET CENTER 0 5 DRILL FLARE, 10 CONN FLARE
	22:30 - 23:30	1.00	DRLPRV	05	G	P	7819	DISPLACE HOLE WITH 11.3 MUD/38 VIS

## Operation Summary Report

Well: NBU 1022-121CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/21/2013

End Date: 6/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/1 2/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	23:30 - 0:00	0.50	DRLPRV	02	B	P	7819	CLOSED LOOP SYSTEM DRILL F/7819 TO 7866=@93 FT/HR WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 170 GPM 498 MW 11.3 PPG VIS 38 TRQ ON/OFF = 11/8 K PSI ON /OFF 2000/1650 , DIFF 300-500 PU/SO/RT =205-- K SLIDE =0 ROT =475 NOV / 2-DEWATERING 6 WEST 6 SOUTH OF TARGET CENTER 0 0 DRILL FLARE,5'CONN FLARE
6/12/2013	0:00 - 4:30	4.50	DRLPRV	02	B	P	7866	CLOSED LOOP SYSTEM DRILL F/7866 TO 8121=255@56FT/HR WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 170 GPM 498 MW 11.3 PPG VIS 38 TRQ ON/OFF = 11/8 K PSI ON /OFF 2000/1650 , DIFF 300-500 PU/SO/RT =210/145/160 K SLIDE =0 ROT =255 NOV / 2-BYPASSED 4 SOUTH 5 EAST OF TARGET CENTER 0 DRILL FLARE,0CONN FLARE
	4:30 - 5:00	0.50	DRLPRV	08	B	S	8121	CHANGE SWAB #1 PUMP
	5:00 - 10:30	5.50	DRLPRV	02	B	P	8121	CLOSED LOOP SYSTEM DRILL F/8121 TO TD 8465=344@60 FT/HR WOB / 18-20 RPM TOP DRIVE 55-60 (2 PUMPS) - SPM 170 GPM 498 MW 11.9 PPG VIS 41 TRQ ON/OFF = 13/10 K PSI ON /OFF 2000/1650 , DIFF 300-500 PU/SO/RT =210/145/160 K SLIDE =0 ROT =344 NOV / 2-BYPASSED 10 SOUTH 8 EAST OF TARGET CENTER 0 DRILL FLARE,0CONN FLARE
	10:30 - 11:30	1.00	DRLPRV	05	C	P	8465	FLOW CHECK / NO FLOW,FINALSURVEY@ TD 1.67 DEG 137 AZI ,CIRCULATE BOTTOMS UP FOR WIPER TRIP TO SHOE,FINAL MW 12#/42 3% LCM
	11:30 - 17:00	5.50	DRLPRV	06	E	P	8465	WIPERTRIP TO SHOE NO PROBLEMS/ NO TIGHT HOLE/CORRECT FILL BBLs
	17:00 - 18:00	1.00	DRLPRV	05	C	P	8465	CIRCULATE BOTTOMS UP FOR WIPER TRIP #2 TO SHOE, MW 12#/42 3% LCM,170 STKS 490GPM 2450 PSI, 8' FLARE 5/MINUTES
	18:00 - 20:30	2.50	DRLPRV	06	E	P		WIPER TRIP OUT TO SHOE AND BACK IN TO 4430,CIRCULATE AT SHOE & 4430
	20:30 - 21:00	0.50	DRLPRV	07	A	P	8465	RIG SERVICE
	21:00 - 23:00	2.00	DRLPRV	06	E	P	8465	FINISH WIPER TRIP IN TO BOTTOM,NO PROBLEMS
	23:00 - 0:00	1.00	DRLPRV	05	C	P	8465	CIRCULATE BOTTOMS UP FOR LOGS, MW 12#/42 3% LCM,170 STKS 490GPM 2450 PSI, 8' FLARE 5/MINUTES
6/13/2013	0:00 - 1:30	1.50	DRLPRV	06	A	P	8465	TRIP OUT FOR LOGS

## Operation Summary Report

Well: NBU 1022-121CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/21/2013

End Date: 6/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/1 2/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	1:30 - 2:30	1.00	DRLPRV	08	A	P	8465	***REPAIR DRAWWORKS AIRLINE ON INPUT SHAFT CLUTCH
	2:30 - 4:30	2.00	DRLPRV	06	A	P	8465	TRIP OUT
	4:30 - 9:30	5.00	EVALPR	11	D	P	8465	LOG WITH SCHLUMBERGER(LOGGERS DEPTH 8431')
	9:30 - 10:00	0.50	CSGPRO	14	A	P	8465	PULL WEARRING
	10:00 - 10:30	0.50	CSGPRO	07	A	P	8465	RIG SERVICE
	10:30 - 19:30	9.00	CSGPRO	12	C	P	8465	HELD SAFETY MEETING WITH KIMZEY RIG UP & RUN 193 TOTAL JTS ( 77 JTS I-80 4.5" 11.6# 8 RND LTC, 1 MARKER @6262 1-CROSSOVER @DQX 5004-5025 LTC 113 I-80 DQX 4.5 #11.6 PROD CASING, 1 MANDREL TAIL JT TO GL) SHOE @ 8451, FLOAT COLLAR @8404, CHECK FLOAT EQUIPMENT AND CIRCULATE 5/MIN-20 JTS IN AND BREAK CIRC AGAIN AFTER CROSSOVER JT,RUN IN WITH NO HOLE PROBLEMS LAND ON MANDREL HANGER WITH 85K,(2 HRS DOWN TIME ON TONGS AND CHANGEOUTS ADJUSTED ON TICKET)
	19:30 - 20:30	1.00	CSGPRO	05	D	P	8465	CIRCULATE AND CONDITION FOR CEMENT @ 130 STKS 380GPM,5 FLARE FOR 5 MINUTES
	20:30 - 23:30	3.00	CSGPRO	12	E	P	8465	HELD SAFETY MEETING WITH RIG & CEMENTING CREWS, TEST LINES TO 5000, DROP BOTTOM PLUG, PUMP 25 BBLS WATER SPACER, LEAD 10% EXCESS, 470 SACKS 12.5 PPG 1.98 YLD,PLII +6%GELL +5#skKS +.4%FL52 +.2%SMS +.4% R-3+5#/skSF + 1/4#skCF  TAIL 15% EXCESS 1150 SACKS 14.3 PPG 1.32 YLD,50/50 poz+2%gell+0.55% R-3 + 10%salt+5#blnd S.F.75%SMSSHUT DOWN CLEAN LINES, DROP TOP PLUG & DISPLACE WITH 130 BBLS CLAYCARE WATER, BUMP PLUG @2800 PSI, 650 OVER FINAL LIFT OF 2150 PSI, FLOATS HELD, FULL RETURNS THRU OUT JOB WITH 30 BBLS LEAD BACK TO SURFACE, 1.5 BBLS BACK TO TRUCK, EST TOP OF TAIL 3640', LEAD 0, FLUSH LINES & STACK , R/D
	23:30 - 0:00	0.50	RDMO	14	B	P	8465	RIG DOWN LANDING JOINT,SET PACK OFF WITH CAMERON AND RELOAD HANGER,SAVE MUD AND PREP FOR SKID,RELEASE RIG 23:59 6/13/2013

## US ROCKIES REGION

**1 General****1.1 Customer Information**

Company	US ROCKIES REGION
Representative	
Address	

**1.2 Well/Wellbore Information**

Well	NBU 1022-121CS GREEN	Wellbore No.	OH
Well Name	NBU 1022-121CS	Wellbore Name	NBU 1022-121CS
Report No.	1	Report Date	8/5/2013
Project	UTAH-UINTAH	Site	NBU 1022-121 PAD
Rig Name/No.		Event	COMPLETION
Start Date	7/30/2013	End Date	8/13/2013
Spud Date	5/10/2013	Active Datum	RKB @5,241.00usft (above Mean Sea Level)
UWI	NE/SE/O/10/S/22/E/12/O/O/26/PM/S/2345/E/O/984/O/O		

**1.3 General**

Contractor		Job Method	Supervisor
Perforated Assembly		Conveyed Method	

**1.4 Initial Conditions**

Fluid Type		Fluid Density		Gross Interval	5,536.0 (usft)-8,280.0 (usft)	Start Date/Time	8/5/2013 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	39	End Date/Time	8/5/2013 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	183	Net Perforation Interval	58.00 (usft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.16 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

**1.5 Summary****2 Intervals****2.1 Perforated Interval**

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/5/2013 12:00AM	WASATCH/			5,536.0	5,536.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N



## US ROCKIES REGION

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/5/2013 12:00AM	WASATCH/			5,823.0	5,825.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	WASATCH/			5,837.0	5,840.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			6,463.0	6,466.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			6,626.0	6,629.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			6,790.0	6,792.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			6,809.0	6,811.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			6,878.0	6,880.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			6,896.0	6,898.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			6,950.0	6,951.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			6,975.0	6,976.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			6,984.0	6,986.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,045.0	7,046.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,054.0	7,056.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,288.0	7,289.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,296.0	7,297.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,313.0	7,314.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,324.0	7,325.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,350.0	7,351.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,364.0	7,365.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,399.0	7,400.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,465.0	7,466.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

RECEIVED: Oct. 28, 2013



## US ROCKIES REGION

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/5/2013 12:00AM	MESAVERDE/			7,496.0	7,497.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,536.0	7,537.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,558.0	7,559.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,609.0	7,610.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,649.0	7,650.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,662.0	7,663.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,679.0	7,680.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,721.0	7,722.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,764.0	7,765.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,784.0	7,785.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,888.0	7,889.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,933.0	7,934.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,953.0	7,954.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			7,972.0	7,974.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			8,146.0	8,149.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			8,268.0	8,271.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/5/2013 12:00AM	MESAVERDE/			8,279.0	8,280.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

## 3 Plots

RECEIVED: Oct. 28, 2013

US ROCKIES REGION  
Operation Summary Report

Well: NBU 1022-121CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 7/30/2013

End Date: 8/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/1 2/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
6/29/2013	-							
7/30/2013	7:00 - 8:00	1.00	SUBSPR	52	B	P		<p>FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG &amp; FRAC VALVES</p> <p>1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST 76 PSI.</p> <p>NO COMMUNICATION OR MIGRATION WITH SURFACE CSG</p> <p>BLEED OFF PSI.</p> <p>PRESSURE TEST 8 5/8 X 4 1/2 TO 501 PSI HELD FOR 5 MIN</p> <p>LOST -501 PSI, BLEED PSI OFF, REINSTALLED POP OFF SWIFN</p> <p>NO PRESSURE ON SURFACE CSG</p> <p>FILLED SURFACE WITH 1 BBL</p>
8/1/2013	7:00 - 10:00	3.00	SUBSPR	37		P		<p>PERF STG 1) PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW</p>
8/5/2013	6:30 - 6:45	0.25	FRAC	48		P		HSM,
	7:00 - 17:21	10.35	FRAC	36	B	P		<p>REFER TO STIMULATION PJR FOR FLUID, SAND AND CHEMICAL VOLUMES, ALL STAGES WERE PERFORATED ACCORDING TO PERF RECORD IN OPEN WELLS, ALL STAGES WERE STIMULATED TO VENDOR POST JOB REPORT. ALL PLUGS ARE HALIBURTON 8K CBPS</p> <p>FRAC STG #1] WHP=1623#, BRK DN PERFS=3902#, @=4.5 BPM, INTIAL ISIP=2642#, FG=.76, FINAL ISIP=2552#, FG=.75,</p> <p>SET PLUG &amp; PERFORATE STG #2</p> <p>FRAC STG #2] WHP=1610#, BRK DN PERFS=4213#, @=4.0 BPM, INTIAL ISIP=2834#, FG=.80, FINAL ISIP=2642#, FG=.78,</p> <p>SET PLUG &amp; PERFORATE STG #3</p> <p>FRAC STG #3] WHP=2153#, BRK DN PERFS=3151#, @=3.4 BPM, INTIAL ISIP=2388#, FG=.75, FINAL ISIP=2390#, FG=.75,</p>
8/6/2013	6:30 - 6:45	0.25		48		P		HSM,

## Operation Summary Report

Well: NBU 1022-121CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 7/30/2013

End Date: 8/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/22/E/1 2/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 17:00	10.00		36		P		SET PLUG & PERFORATE STG #4  FRAC STG #4] WHP=1069#, BRK DN PERFS=2795#, @=5.1 BPM, INTIAL ISIP=1847#, FG=.69, FINAL ISIP=2044#, FG=.72,  SET PLUG PERFORATE STG #5  FRAC STG #5] WHP=590#, BRK DN PERFS=3263#, @=4.6 BPM, INTIAL ISIP=1526#, FG=.66, FINAL ISIP=2164#, FG=.75,  SET PLUG AND PERFORATE STG #6
8/7/2013	6:30 - 6:45	0.25		48		P		HSM,
	7:00 - 12:00	5.00	FRAC	36	B	P		FRAC STG #6] WHP=1129#, BRK DN PERFS=3109#, @=3.7 BPM, INTIAL ISIP=1853#, FG=.71, FINAL ISIP=2344#, FG=.78,  SET PLUG AND PERFORATE STG #7  FRAC STG #7] WHP=499#, BRK DN PERFS=2788#, @=4.3 BPM, INTIAL ISIP=1628#, FG=.69, FINAL ISIP=1628#, FG=.71,  SET PLUG AND PERFORATE STG #8  FRAC STG #8] WHP=128#, BRK DN PERFS=2882#, @=3.6 BPM, INTIAL ISIP=1648#, FG=.73, FINAL ISIP=1823#, FG=.76,  SET TOP KILL  TOTAL BBLS= 7237 TOTAL SAND= 148360
8/12/2013	6:45 - 7:00	0.25	DRLOUT	48		P		HSM. PINTCH POINTS.
	7:00 - 15:00	8.00	DRLOUT	31	I	P		OPEN WELL 0 PSI. RU FLOOR & TBG EQUIP. PREP & TALLY NEW 2 3/8 TBG. ( SPLIT STING ) PU 3 7/8 BIT, X-DART, POBS & XN-NIPPLE. ( 1.875 ) RIH W/ 150 JTS 2 3/8, J-55 & 24 JTS L-80. TOTAL JTS IN WELL = 174 JTS. TAG SAND @ 5470'. RU DRL EQUIP. FILL WELL W/ T-MAC. PSI TEST BOP T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. SWIFN.
8/13/2013	6:45 - 7:00	0.25	DRLOUT	48		P		HSM. SLIPS, TRIPS & FALLS

## Operation Summary Report

Well: NBU 1022-121CS GREEN

Spud Date: 5/10/2013

Project: UTAH-UINTAH

Site: NBU 1022-121 PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 7/30/2013

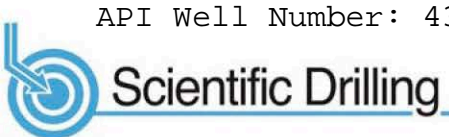
End Date: 8/13/2013

Active Datum: RKB @5,241.00usft (above Mean Sea Level)


UWI: NE/SE/0/10/S/22/E/1 2/0/0/26/PM/S/2345/E/0/984/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 18:00	11.00	DRLOUT	44	C	P		<p>OPEN WELL O PSI.  BRK CONV CIRC. BEG DRL OUT 8 CBP'S.  1st CBP) TAG SAND @ 5470' = 10'. DRL OUT CBP @ 5480' IN 5 MIN. 0 PSI INCR. CONT RIH.  2nd CBP) TAG SAND @ 5850' = 20'. DRL OUT CBP @ 5870' IN 5 MIN. 100 PSI INCR. CONT RIH.  3rd CBP) TAG SAND @ 6639' = 20'. DRL OUT CBP @ 6659' IN 10 MIN. 200 PSI INCR. CONT RIH.  4th CBP) TAG SAND @ 6900' = 28'. DRL OUT CBP @ 6928' IN 10 MIN. 600 PSI INCR. CONT RIH.  5th CBP) TAG SAND @ 7066' = 20'. DRL OUT CBP @ 7086' IN 5 MIN. 300 PSI INCR. CONT RIH.  6th CBP) TAG SAND @ 7451' = 35'. DRL OUT CBP @ 7486' IN 5 MIN. 400 PSI INCR. CONT RIH.  7th CBP) TAG SAND @ 7675' = 35'. DRL OUT CBP @ 7710' IN 8 MIN. 400 PSI INCR. CONT RIH.  8th CBP) TAG SAND @ 7968' = 40'. DRL OUT CBP @ 8008' IN 8MIN. 600 PSI INCR. CONT RIH.  TAG PBTD @ 8395' = 115' OF RAT HOLE.  CIRC WELL. RD DRL EQUIP. POOH, LD 22 EXESS  JTS 2 3/8 L-80 TBG. PU 4 1/16 TBG HNGR. LAND  TBG W/  KB = 19.00  4 1/16 TBG HNGR = .83  92 JTS L-80 TBG = 2919.93  6' x 2 3/8, L-80 PUP JT = 6.16  150 JTS J-55 TBG = 4746.38  XN-NIPPLE 1.875 = 2.20  EOT @ 7694.50  ND BOP. NU WH. DROP BALL. PUMP 10 GAL  CORROSION INHIB, FLUSH W/ 31 BBL T-MAC. PUMP  BIT OFF. DID NOT SEE BIT GO. SWI. PSI TEST HAL  9000 LINES T/ 3000 PSI. GOOD TEST. BLEED OFF  PSI. OPEN WELL T/ FBT. UNLOAD TBG. TURN WELL  OVER T/ FBC.  RD RIG. SLIDE OVER T/ 1214BS.</p> <p>TOTAL LOAD = 7235 BBLS  RIG RECOVERD = 1525 BBLS  LEFT T/ RECOVER = 5710 BBLS.</p> <p>TBG  USED IN WELL = 92 JTS L-80, 150 JTS J-55, TOTAL  = 242 JTS.  SENT BACK T/ C-TAP = 73 JTS L-80.</p>
	18:00 - 18:00	0.00	DRLOUT	50				<p>WELL TURNED TO SALES @ 1500 HR ON  8/13/2013. 1900 MCFD, 1560 BWPD, FCP 1990#, FTP  1943#, 20/64" CK.</p>



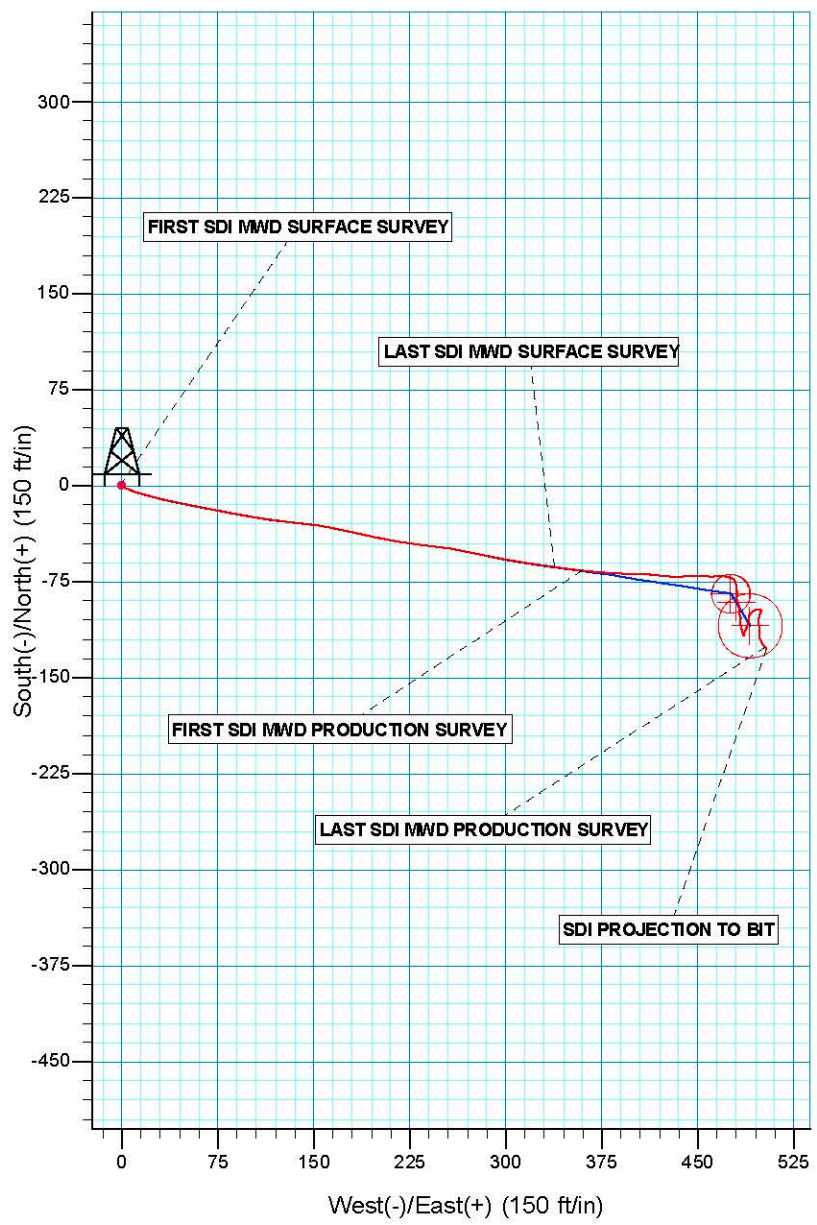
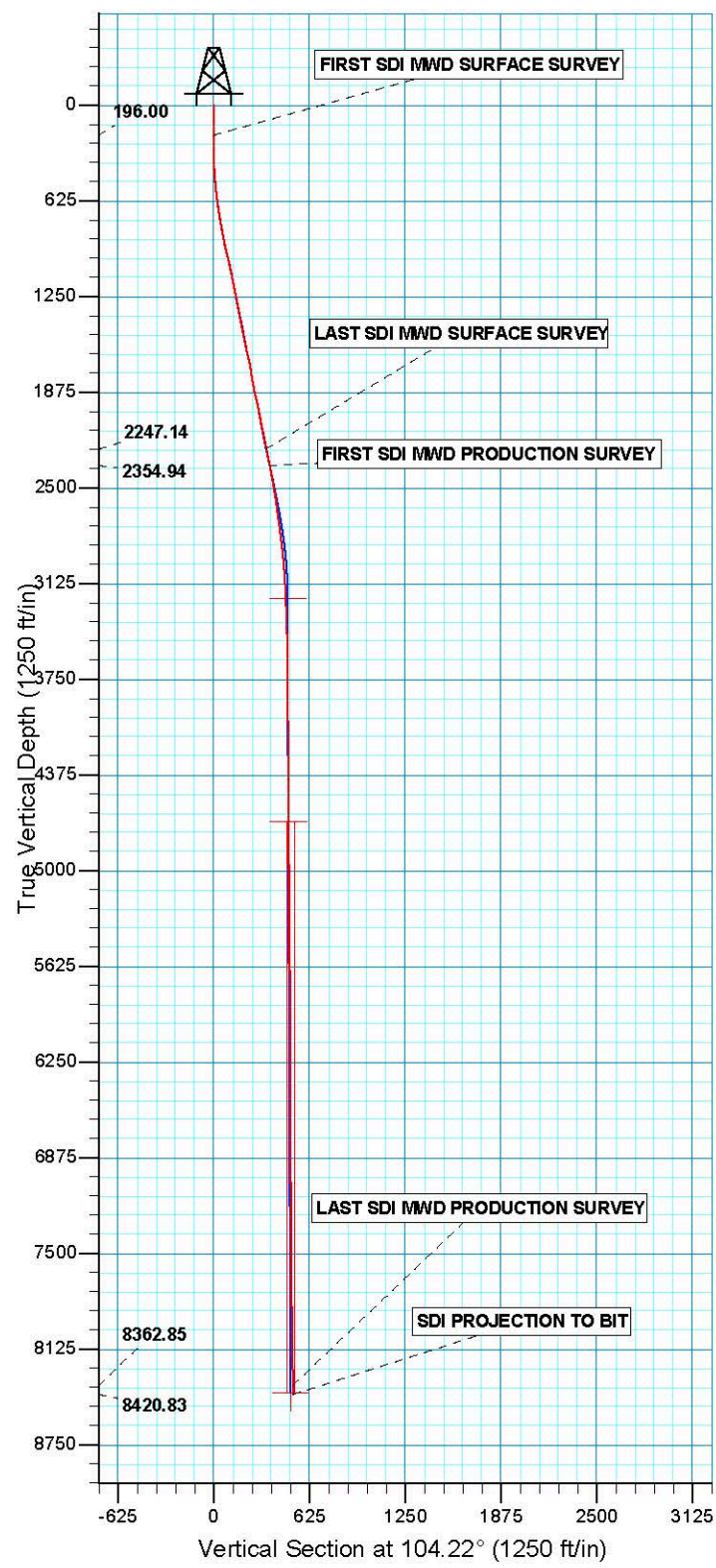


WELL DETAILS: NBU 1022-12I1CS					
GL 5222 & 19 @ 5241.00ft (PIONEER 54)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14516559.07	2093896.15	39.962653	-109.381687



Azimuths to True North  
 Magnetic North: 10.76°

Magnetic Field  
 Strength: 52123.9snT  
 Dip Angle: 65.81°  
 Date: 06/15/2013  
 Model: IGRF2010



PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone:	Zone 12N (114 W to 108 W)
Location:	SECTION 12 T10S R22E
System Datum:	Mean Sea Level





## **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**NBU 1022-12I PAD**

**NBU 1022-12I1CS**

**OH**

**Design: OH**

## **Standard Survey Report**

**13 June, 2013**





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-121CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5222 & 19 @ 5241.00ft (PIONEER 54)
<b>Site:</b>	NBU 1022-121 PAD	<b>MD Reference:</b>	GL 5222 & 19 @ 5241.00ft (PIONEER 54)
<b>Well:</b>	NBU 1022-121CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

Site		NBU 1022-121 PAD, SECTION 12 T10S R22E			
Site Position:		Northing:	14,516,563.60 usft	Latitude:	39.962665
From:	Lat/Long	Easting:	2,093,905.03 usft	Longitude:	-109.381655
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	1.04 °

Well		NBU 1022-1211CS, 2345 FSL 984 FEL				
Well Position	+N/-S	0.00 ft	Northing:	14,516,559.08 usft	Latitude:	39.962653
	+E/-W	0.00 ft	Easting:	2,093,896.15 usft	Longitude:	-109.381687
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,222.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	06/15/13	10.76	65.81	52,124

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	104.22	

<b>Survey Program</b>	<b>Date</b>	06/13/13			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
15.00	2,280.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,390.00	8,465.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
196.00	0.70	266.28	196.00	-0.07	-1.10	-1.05	0.39	0.39	0.00
<b>FIRST SDI MWD SURFACE SURVEY</b>									
283.00	0.61	126.13	282.99	-0.38	-1.26	-1.13	1.42	-0.10	-161.09
370.00	2.55	112.64	369.96	-1.40	0.90	1.22	2.26	2.23	-15.51
463.00	4.22	109.57	462.79	-3.34	6.03	6.67	1.81	1.80	-3.30
553.00	5.89	107.28	552.44	-5.82	13.56	14.58	1.87	1.86	-2.54
643.00	7.83	105.44	641.79	-8.83	23.88	25.32	2.17	2.16	-2.04
733.00	9.76	102.19	730.73	-12.07	37.25	39.07	2.21	2.14	-3.61



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-121CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5222 & 19 @ 5241.00ft (PIONEER 54)
<b>Site:</b>	NBU 1022-121 PAD	<b>MD Reference:</b>	GL 5222 & 19 @ 5241.00ft (PIONEER 54)
<b>Well:</b>	NBU 1022-121CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
823.00	10.73	101.48	819.29	-15.35	52.92	55.07	1.09	1.08	-0.79
913.00	11.78	100.69	907.56	-18.72	70.16	72.61	1.18	1.17	-0.88
1,003.00	12.66	100.34	995.52	-22.19	88.89	91.62	0.98	0.98	-0.39
1,093.00	12.66	99.64	1,083.33	-25.61	108.31	111.29	0.17	0.00	-0.78
1,183.00	12.05	95.68	1,171.25	-28.20	127.39	130.41	1.16	-0.68	-4.40
1,273.00	10.90	95.59	1,259.45	-29.95	145.20	148.11	1.28	-1.28	-0.10
1,363.00	10.90	102.45	1,347.83	-32.62	161.98	165.03	1.44	0.00	7.62
1,453.00	11.52	102.71	1,436.11	-36.43	179.06	182.52	0.69	0.69	0.29
1,543.00	11.96	102.27	1,524.23	-40.39	196.94	200.82	0.50	0.49	-0.49
1,633.00	11.52	98.76	1,612.35	-43.74	214.93	219.09	0.93	-0.49	-3.90
1,723.00	10.64	97.18	1,700.67	-46.15	232.06	236.28	1.03	-0.98	-1.76
1,813.00	10.06	96.76	1,789.20	-48.11	248.11	252.32	0.65	-0.64	-0.47
1,903.00	10.93	101.49	1,877.70	-50.74	264.28	268.64	1.36	0.97	5.26
1,993.00	11.70	101.66	1,965.95	-54.28	281.57	286.28	0.86	0.86	0.19
2,083.00	11.43	100.87	2,054.12	-57.81	299.27	304.30	0.35	-0.30	-0.88
2,173.00	11.61	98.14	2,142.31	-60.77	316.99	322.21	0.64	0.20	-3.03
2,263.00	11.52	97.70	2,230.48	-63.26	334.86	340.14	0.14	-0.10	-0.49
2,280.00	11.52	97.97	2,247.14	-63.72	338.23	343.52	0.32	0.00	1.59
LAST SDI MWD SURFACE SURVEY									
2,390.00	11.43	96.80	2,354.94	-66.53	359.93	365.24	0.23	-0.08	-1.06
FIRST SDI MWD PRODUCTION SURVEY									
2,485.00	10.64	93.73	2,448.18	-68.22	378.03	383.20	1.04	-0.83	-3.23
2,579.00	9.41	91.00	2,540.75	-68.92	394.37	399.22	1.40	-1.31	-2.90
2,674.00	8.62	92.76	2,634.57	-69.39	409.25	413.75	0.88	-0.83	1.85
2,769.00	8.27	96.72	2,728.54	-70.54	423.14	427.50	0.71	-0.37	4.17
2,863.00	7.83	88.81	2,821.62	-71.20	436.26	440.38	1.27	-0.47	-8.41
2,957.00	5.28	88.02	2,915.00	-70.91	446.98	450.71	2.71	-2.71	-0.84
3,051.00	3.87	92.94	3,008.70	-70.93	454.47	457.97	1.56	-1.50	5.23
3,145.00	3.69	89.25	3,102.49	-71.05	460.67	464.01	0.32	-0.19	-3.93
3,239.00	2.90	85.03	3,196.34	-70.80	466.06	469.17	0.88	-0.84	-4.49
3,332.00	2.20	102.52	3,289.24	-70.99	470.15	473.18	1.12	-0.75	18.81
3,426.00	1.93	101.81	3,383.18	-71.70	473.46	476.57	0.29	-0.29	-0.76
3,520.00	1.32	108.05	3,477.15	-72.36	476.04	479.23	0.67	-0.65	6.64
3,615.00	1.32	106.21	3,572.12	-73.01	478.13	481.41	0.04	0.00	-1.94
3,710.00	2.02	169.31	3,667.09	-74.96	479.49	483.21	1.94	0.74	66.42
3,803.00	2.02	165.97	3,760.03	-78.16	480.19	484.68	0.13	0.00	-3.59
3,896.00	1.14	199.02	3,852.99	-80.62	480.29	485.38	1.33	-0.95	35.54
3,991.00	0.26	138.55	3,947.99	-81.68	480.12	485.48	1.09	-0.93	-63.65
4,085.00	0.53	133.81	4,041.98	-82.14	480.58	486.03	0.29	0.29	-5.04
4,180.00	0.62	180.83	4,136.98	-82.96	480.89	486.53	0.49	0.09	49.49
4,274.00	0.88	186.45	4,230.97	-84.18	480.80	486.75	0.29	0.28	5.98
4,369.00	1.14	187.07	4,325.96	-85.84	480.60	486.96	0.27	0.27	0.65
4,464.00	1.14	176.26	4,420.94	-87.73	480.54	487.37	0.23	0.00	-11.38





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-1211CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5222 & 19 @ 5241.00ft (PIONEER 54)
<b>Site:</b>	NBU 1022-121 PAD	<b>MD Reference:</b>	GL 5222 & 19 @ 5241.00ft (PIONEER 54)
<b>Well:</b>	NBU 1022-1211CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,559.00	1.23	155.34	4,515.92	-89.60	481.03	488.30	0.46	0.09	-22.02
4,654.00	1.14	170.28	4,610.90	-91.45	481.62	489.33	0.34	-0.09	15.73
4,748.00	1.14	167.47	4,704.88	-93.29	481.98	490.13	0.06	0.00	-2.99
4,843.00	1.14	174.24	4,799.86	-95.15	482.28	490.87	0.14	0.00	7.13
4,938.00	1.23	173.53	4,894.84	-97.10	482.49	491.56	0.10	0.09	-0.75
5,033.00	0.97	176.70	4,989.82	-98.92	482.65	492.16	0.28	-0.27	3.34
5,127.00	1.14	165.54	5,083.81	-100.62	482.93	492.85	0.28	0.18	-11.87
5,222.00	1.32	165.27	5,178.79	-102.59	483.44	493.83	0.19	0.19	-0.28
5,317.00	0.35	197.18	5,273.77	-103.93	483.63	494.35	1.09	-1.02	33.59
5,409.00	0.70	188.56	5,365.77	-104.75	483.47	494.39	0.39	0.38	-9.37
5,504.00	1.06	179.77	5,460.76	-106.21	483.38	494.66	0.40	0.38	-9.25
5,599.00	1.06	177.31	5,555.74	-107.96	483.43	495.14	0.05	0.00	-2.59
5,692.00	1.23	167.38	5,648.72	-109.80	483.69	495.84	0.28	0.18	-10.68
5,785.00	1.23	166.77	5,741.70	-111.74	484.13	496.75	0.01	0.00	-0.66
5,879.00	1.32	166.33	5,835.68	-113.77	484.62	497.72	0.10	0.10	-0.47
5,975.00	1.49	159.82	5,931.65	-116.02	485.31	498.94	0.24	0.18	-6.78
6,069.00	0.44	178.63	6,025.64	-117.53	485.74	499.73	1.15	-1.12	20.01
6,162.00	1.23	17.26	6,118.63	-116.93	486.05	499.88	1.78	0.85	-173.52
6,257.00	2.02	17.09	6,213.59	-114.36	486.84	500.02	0.83	0.83	-0.18
6,352.00	1.14	38.18	6,308.56	-112.02	487.92	500.49	1.10	-0.93	22.20
6,445.00	1.76	16.56	6,401.53	-109.92	488.90	500.92	0.88	0.67	-23.25
6,538.00	1.58	17.62	6,494.49	-107.33	489.69	501.05	0.20	-0.19	1.14
6,633.00	1.93	359.69	6,589.44	-104.48	490.08	500.73	0.68	0.37	-18.87
6,728.00	1.49	19.37	6,684.40	-101.72	490.48	500.44	0.77	-0.46	20.72
6,822.00	1.41	40.91	6,778.37	-99.69	491.64	501.07	0.58	-0.09	22.91
6,916.00	1.41	50.13	6,872.34	-98.07	493.29	502.27	0.24	0.00	9.81
7,008.00	1.14	69.21	6,964.32	-97.02	495.01	503.68	0.54	-0.29	20.74
7,107.00	1.32	95.14	7,063.30	-96.77	497.07	505.61	0.58	0.18	26.19
7,195.00	1.32	108.14	7,151.27	-97.18	499.04	507.63	0.34	0.00	14.77
7,288.00	1.06	206.40	7,244.26	-98.29	499.68	508.51	1.94	-0.28	105.66
7,383.00	0.97	203.86	7,339.25	-99.81	498.96	508.19	0.11	-0.09	-2.67
7,478.00	1.41	193.75	7,434.23	-101.68	498.36	508.07	0.51	0.46	-10.64
7,571.00	1.32	193.13	7,527.20	-103.83	497.84	508.10	0.10	-0.10	-0.67
7,667.00	1.41	181.27	7,623.17	-106.09	497.57	508.38	0.31	0.09	-12.35
7,761.00	1.93	172.04	7,717.13	-108.81	497.76	509.24	0.62	0.55	-9.82
7,856.00	2.37	172.83	7,812.07	-112.35	498.23	510.56	0.46	0.46	0.83
7,951.00	1.58	185.40	7,907.01	-115.60	498.35	511.48	0.94	-0.83	13.23
8,045.00	1.49	171.95	8,000.98	-118.10	498.40	512.14	0.39	-0.10	-14.31
8,141.00	1.41	156.57	8,096.95	-120.42	499.04	513.33	0.41	-0.08	-16.02
8,236.00	1.32	152.53	8,191.92	-122.46	500.01	514.77	0.14	-0.09	-4.25
8,330.00	1.67	149.45	8,285.89	-124.60	501.21	516.46	0.38	0.37	-3.28
8,407.00	1.67	136.97	8,362.85	-126.39	502.54	518.19	0.47	0.00	-16.21
LAST SDI MWD PRODUCTION SURVEY									
8,465.00	1.67	136.97	8,420.83	-127.63	503.70	519.61	0.00	0.00	0.00



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-121CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 5222 & 19 @ 5241.00ft (PIONEER 54)
<b>Site:</b>	NBU 1022-121 PAD	<b>MD Reference:</b>	GL 5222 & 19 @ 5241.00ft (PIONEER 54)
<b>Well:</b>	NBU 1022-121CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
SDI PROJECTION TO BIT									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
196.00	196.00	-0.07	-1.10	FIRST SDI MWD SURFACE SURVEY
2,280.00	2,247.14	-63.72	338.23	LAST SDI MWD SURFACE SURVEY
2,390.00	2,354.94	-66.53	359.93	FIRST SDI MWD PRODUCTION SURVEY
8,407.00	8,362.85	-126.39	502.54	LAST SDI MWD PRODUCTION SURVEY
8,465.00	8,420.83	-127.63	503.70	SDI PROJECTION TO BIT

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_